

SAMSUNG

User Manual

SBB-SSF

The colour and the appearance may differ depending on the product, and the specifications are subject to change without prior notice to improve the performance.

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Chapter 01

Before Using the Product

Copyright

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Ownership of all other trademarks is attributed to their due owner.

- An administration fee may be charged if either
 - (a) an engineer is called out at your request and there is no defect in the product (i.e. where you have failed to read this user manual).
 - (b) you bring the unit to a repair centre and there is no defect in the product (i.e. where you have failed to read this user manual).
- The amount of such administration charge will be advised to you before any work or home visit is carried out.

Safety Precautions

Warning

A serious or fatal injury may result if instructions are not followed.



Activities marked by this symbol are prohibited.

Caution

Personal injury or damage to properties may result if instructions are not followed.



Instructions marked by this symbol must be followed.

Electricity and Safety

Warning

Do not use a damaged power cord or plug, or a loose power socket.

- An electric shock or fire may result.

Do not use multiple products with a single power socket.

- Overheated power sockets may cause a fire.

Do not touch the power plug with wet hands. Otherwise, an electric shock may result.

Insert the power plug all the way in so it is not loose.

- An unsecure connection may cause a fire.

Connect the power plug to a grounded power socket (type 1 insulated devices only).

- An electric shock or injury may result.

Do not bend or pull the power cord with force. Be careful not to leave the power cord under a heavy object.

- Damage to the cord may result in a fire or electric shock.

Do not place the power cord or product near heat sources.

- A fire or electric shock may result.

Clean any dust around the pins of the power plug or the power socket with a dry cloth.

- A fire may result.

Caution

Do not disconnect the power cord while the product is being used.

- The product may become damaged by an electric shock.

Only use the power cord provided with your product by Samsung. Do not use the power cord with other products.

- A fire or electric shock may result.

Keep the power socket where the power cord is connected unobstructed.

- The power cord must be disconnected to cut off power to the product when an issue occurs.
- Note that the product is not completely powered down by using only the power button on the remote.

Hold the plug when disconnecting the power cord from the power socket.

- An electric shock or fire may result.

Installation

Warning

DO NOT PLACE CANDLES, INSECT REPELLANTS OR CIGARETTES ON TOP OF THE PRODUCT. DO NOT INSTALL THE PRODUCT NEAR HEAT SOURCES.

- A fire may result.

Have a technician install the wall-mount hanger.

- Installation by an unqualified person can result in an injury.
- Only use approved cabinets.

Do not install the product in poorly ventilated spaces such as a bookcase or closet.

- An increased internal temperature may cause a fire.

Install the product at least 10 cm away from the wall to allow ventilation.

- An increased internal temperature may cause a fire.

Keep the plastic packaging out of the reach of children.

- Children may suffocate.

Do not install the product on an unstable or vibrating surface (insecure shelf, sloped surface, etc.)

- The product may fall and become damaged and/or cause an injury.
- Using the product in an area with excess vibration may damage the product or cause a fire.

Do not install the product in a vehicle or a place exposed to dust, moisture (water drips, etc.), oil, or smoke.

- A fire or electric shock may result.

Do not expose the product to direct sunlight, heat, or a hot object such as a stove.

- The product lifespan may be reduced or a fire may result.

Do not install the product within the reach of young children.

- The product may fall and injure children.

Edible oil, such as soybean oil, can damage or deform the product. Do not install the product in a kitchen or near a kitchen counter.

Caution

Do not drop the product while moving.

- Product failure or personal injury may result.

Do not set down the product on its front.

- The screen may become damaged.

When installing the product on a cabinet or shelf, make sure that the bottom edge of the front of the product is not protruding.

- The product may fall and become damaged and/or cause an injury.
- Install the product only on cabinets or shelves of the right size.

Set down the product gently.

- Product failure or personal injury may result.

Installing the product in an unusual place (a place exposed to a lot of fine dust, chemical substances, extreme temperatures or a significant presence of moisture, or a place where the product will operate continuously for an extended period of time) may seriously affect its performance.

- Be sure to consult Samsung Customer Service Centre if you want to install the product at such a place.

Operation

Warning

There is a high voltage inside the product. Never disassemble, repair or modify the product yourself.

- A fire or electric shock may result.
- Contact Samsung Customer Service Centre for repairs.

Before moving the product, turn off the power switch and disconnect the power cable and all other connected cables.

- Damage to the cord may result in a fire or electric shock.

If the product generates abnormal sounds, a burning smell or smoke, disconnect the power cord immediately and contact Samsung Customer Service Centre.

- An electric shock or fire may result.

If the product is dropped or the outer case is damaged, turn off the power switch and disconnect the power cord. Then contact Samsung Customer Service Centre.

- Continued use can result in a fire or electric shock.

Do not leave heavy objects or items that children like (toys, sweets, etc.) on top of the product.

During a lightning or thunderstorm, power off the product and remove the power cable.

- A fire or electric shock may result.

Do not drop objects on the product or apply impact.

- A fire or electric shock may result.

Do not move the product by pulling the power cord or any cable.

- Product failure, an electric shock or fire may result from a damaged cable.

If a gas leakage is found, do not touch the product or power plug. Also, ventilate the area immediately.

- Sparks can cause an explosion or fire.

Do not lift or move the product by pulling the power cord or any cable.

- Product failure, an electric shock or fire may result from a damaged cable.

Do not use or keep combustible spray or an inflammable substance near the product.

- An explosion or fire may result.

Ensure the vents are not blocked by tablecloths or curtains.

- An increased internal temperature may cause a fire.

Do not insert metallic objects (chopsticks, coins, hairpins, etc) or objects that burn easily (paper, matches, etc) into the product (via the vent or input/output ports, etc).

- Be sure to power off the product and disconnect the power cord when water or other foreign substances have entered the product. Then contact Samsung Customer Service Centre.
- Product failure, an electric shock or fire may result.

Do not place objects containing liquid (vases, pots, bottles, etc) or metallic objects on top of the product.

- Be sure to power off the product and disconnect the power cord when water or other foreign substances have entered the product. Then contact Samsung Customer Service Centre.
- Product failure, an electric shock or fire may result.

Caution

Disconnect the power cord from the power socket if you do not plan on using the product for an extended period of time (vacation, etc).

- Dust accumulation combined with heat can cause a fire, electric shock or electric leakage.

Do not put AC/DC adapters together.

- Otherwise, a fire may result.

Remove the plastic bag from the AC/DC adapter before you use it.

- Otherwise, a fire may result.

Do not let water enter the AC/DC adapter device or get the device wet.

- An electric shock or fire may result.
- Avoid using the product outdoors where it can be exposed to rain or snow.
- Be careful not to get the AC/DC adapter wet when you wash the floor.

Do not put the AC/DC adapter near to any heating apparatus.

- Otherwise, a fire may result.

Keep the AC/DC adapter in a well-ventilated area.

If you place the AC/DC power adapter so that it is hanging with the cord input facing upwards, water or other foreign substances could enter the Adapter and cause the Adapter to malfunction.

Make sure to rest the AC/DC power adapter flat on a table or the floor.

Do not use humidifiers or stoves around the product.

- A fire or electric shock may result.

Store small accessories out of the reach of children.

Do not place heavy objects on the product.

- Product failure or personal injury may result.

When using headphones or earphones, do not turn the volume too high.

- Having the sound too loud may damage your hearing.

Be careful that children do not place the battery in their mouths when removed from the remote control. Place the battery in a location that children or infants cannot reach.

- If children have had the battery in their mouths, consult your doctor immediately.

When replacing the battery, insert it with the right polarity (+, -).

- Otherwise, the battery may become damaged or it may cause fire, personal injury or damage due to leakage of the internal liquid.

Use only the specified standardised batteries, and do not use a new battery and a used battery at the same time.

- Otherwise, the batteries may be damaged or cause fire, personal injury or damage due to a leakage of the internal liquid.

The batteries (and rechargeable batteries) are not ordinary refuse and must be returned for recycling purposes. The customer is responsible for returning the used or rechargeable batteries for recycling.

- The customer can return used or rechargeable batteries to a nearby public recycling centre or to a store selling the same type of the battery or rechargeable battery.

Do not dispose of batteries in a fire.

Cleaning

- Exercise care when cleaning as the panel and exterior of advanced LCDs are easily scratched.
- Take the following steps when cleaning.

1 Power off the product and computer.

2 Disconnect the power cord from the product.

- Hold the power cable by the plug and do not touch the cable with wet hands. Otherwise, an electric shock may result.

3 Wipe the product with a clean, soft and dry cloth.

- Do not use detergents that contain alcohol, solvent or surface-active agents.
- Do not spray water or detergent directly on the product.

4 Wet a soft and dry cloth in water and wring thoroughly to clean the exterior of the product.

5 Connect the power cord to the product when cleaning is finished.

6 Power on the product and computer.

Storage

Due to the characteristics of high-glossy products, using a UV humidifier nearby may create white-coloured stains on the product.

- Contact Customer Service Centre if the inside of the product needs cleaning (service fee will be charged).

Chapter 02

Preparations

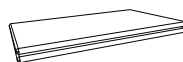
Checking the Components

Components

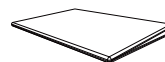
- Contact the vendor where you purchased the product if any components are missing.
- The appearance of the components may differ from the images shown.
- The RS232C adapter can be used to connect to another monitor using the D-SUB (9-pin) type RS232C cable.



Quick Setup Guide



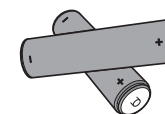
Warranty card
(Not available in some locations)



Regulatory guide



Power cord



Batteries
(Not available in some locations)



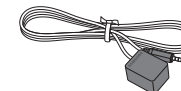
Remote Control



DP cable



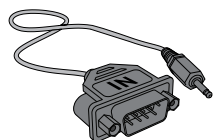
AC/DC adapter



IR blaster cable



Velcro



RS232C(IN) adapter



Rubber (x 2)



Screw (M4 L8) (x 5)



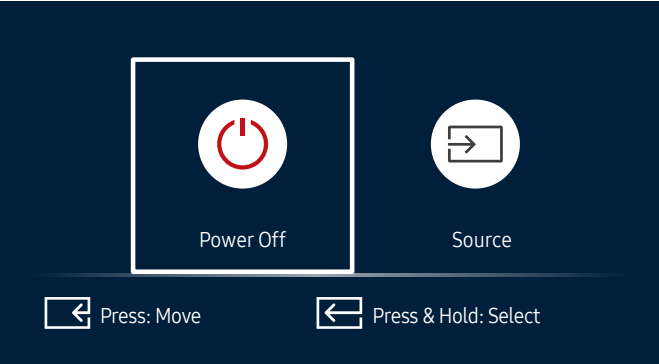
Screw (M4 L8 B-Type) (x 4)










Parts



Control Panel

When the product is on, press  to display the control menu.

Control menu

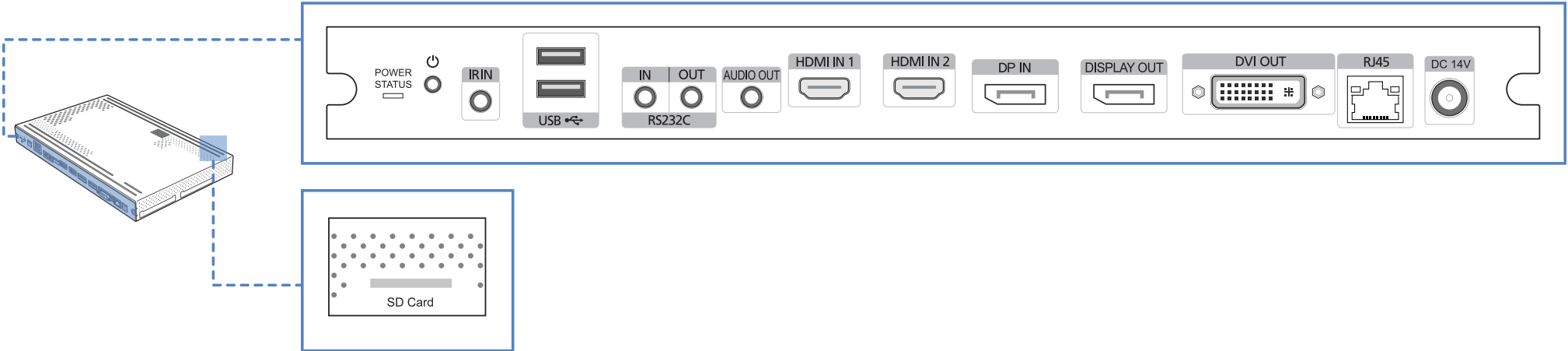


Buttons	Description
 Power Off	Power off the product. On the control menu screen, press  to move the cursor to Power Off  , and then press and hold  to turn off the product.
 Source	Select the connected input source. On the control menu screen, press  to move the cursor to Source  , and then press and hold  to display the input source screen. With the input source screen displayed, press and hold  to change the input source.

- The  button can be used to control **Power Off** and **Source** only.
- To close the control menu screen, wait more than 3 seconds without pressing .

Reverse Side

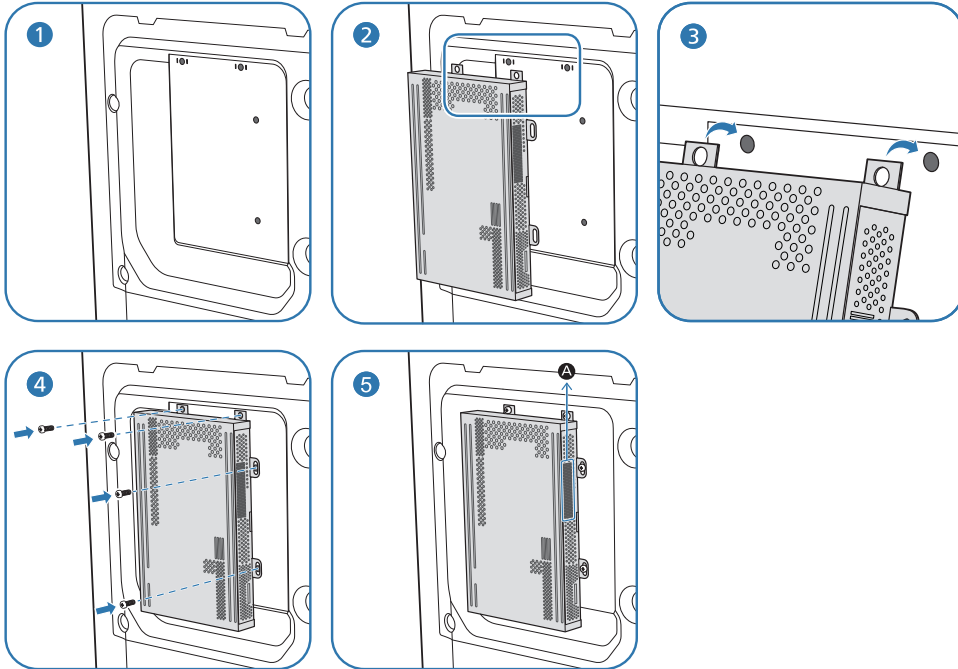
— The colour and shape of parts may differ from what is shown. Specifications are subject to change without notice to improve quality.



Port	Description
POWER STATUS	View the power status of the Signage Player Box.
	Power on or off the Signage Player Box.
IR IN	Connect to the IR blaster cable.
USB	Connect to a USB memory device.
RS232C OUT	Connects to MDC using an RS232C adapter.
RS232C IN	
AUDIO OUT	Outputs sound to an audio device via an audio cable.

Port	Description
HDMI IN 1, HDMI IN 2	Connects to a source device using a HDMI cable or HDMI-DVI cable.
DP IN	Connects to a PC using a DP cable.
DISPLAY OUT	Connects to another display device, using a DP cable.
DVI OUT	Use the DVI cable or HDMI-DVI cable to connect the Signage Player Box to the display device.
RJ45	Connects to MDC using a LAN cable. (10/100 Mbps)
DC 14V	Connects to the AC/DC adapter.
SD Card	Connect to an SD memory card.

Mounting the Signage Player Box

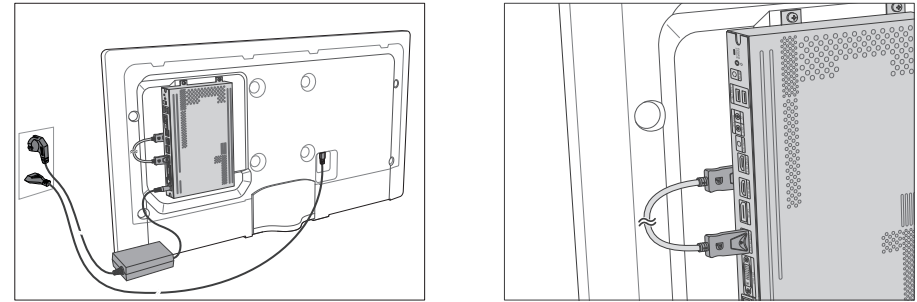


To install the Signage Player Box inside the product, ensure it is installed by a technician who is trained to install and disassemble the product.

* Ensure the vents (A) are not blocked by an object.

* If you mount this Signage Player Box on your display device, the Samsung Ultra Slim WallMount (WMN1000*/WMN2000*) cannot be used.

Connecting to the Signage Player Box



Use a DP or DVI cable to connect the **DISPLAY OUT** or **DVI OUT** port on the Signage Player Box to the display device.

* Press **SOURCE** on the remote control provided with the display device to change the input source to **MagicInfo**.

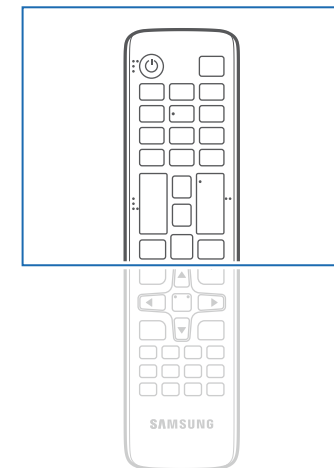
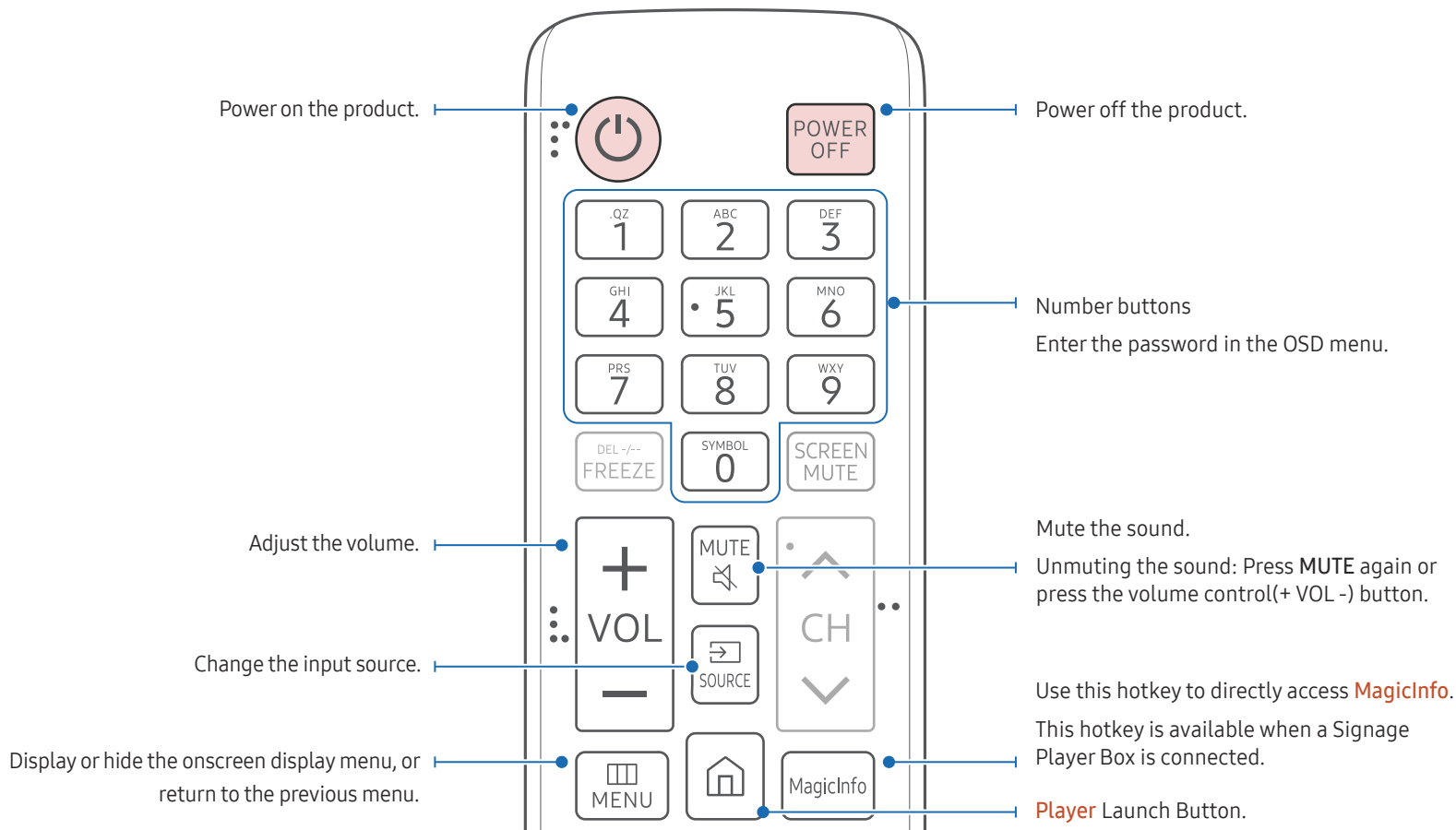
* To view media in UHD resolution, use the supplied DP cable.

— The device may generate heat during operation. Need caution.

When connecting the Signage Player Box to the display device using the DVI-to-DVI connections, set the **HOT PLUG DETECT** (Samsung display's menu: **HDMI Hot Plug**) of the display device to **On**.

Remote Control

- Using other display devices in the same space as the remote control of this product can cause the other display devices to be inadvertently controlled.
- A button without a description in the image below is not supported on the product.

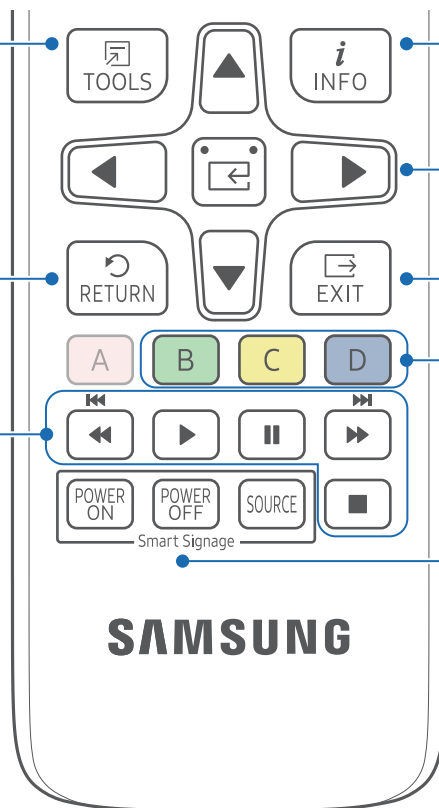


– Remote control button functions may differ for different products.

Quickly select frequently used functions.

Return to the previous menu.

Used in multimedia mode.



Display information about the current input source.

Move to the upper, lower, left or right menu, or adjust an option's setting.
Confirm a menu selection.

Exit the current menu.

Manually select a connected input source from **HDMI 1**, **HDMI 2**, or **DisplayPort**.

POWER ON / POWER OFF

Turn on or off the Smart Signage device.

SOURCE

View or select an external device connected to the Smart Signage device.



– Remote control button functions may differ for different products.

Press a button on the remote control pointing at the sensor on the front of the product to perform the corresponding function.

– Using other display devices in the same space as the remote control of this product can cause the other display devices to be inadvertently controlled.

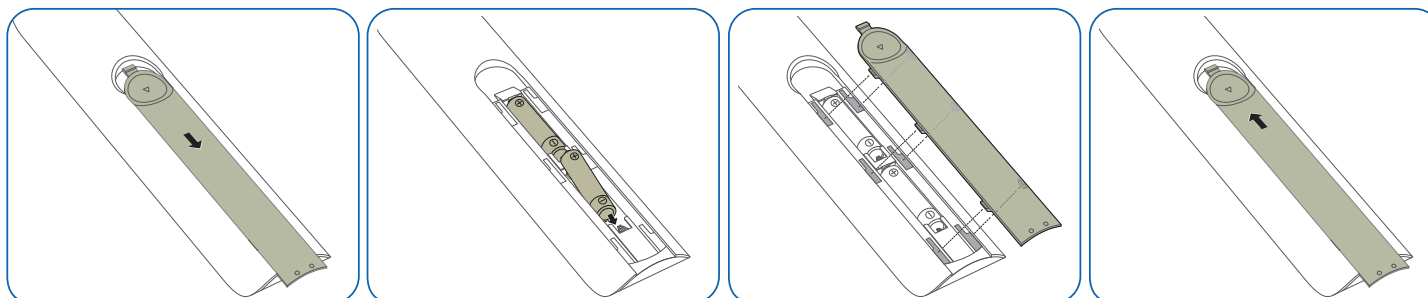
Use the remote control within 7 m to 10 m from the sensor on the product at an angle of 30° from the left and right.

– Store used batteries out of reach of children and recycle.

– Do not use a new and used battery together. Replace both batteries at the same time.

– Remove batteries when the remote control is not to be used for an extended period of time.

To place batteries in the remote control



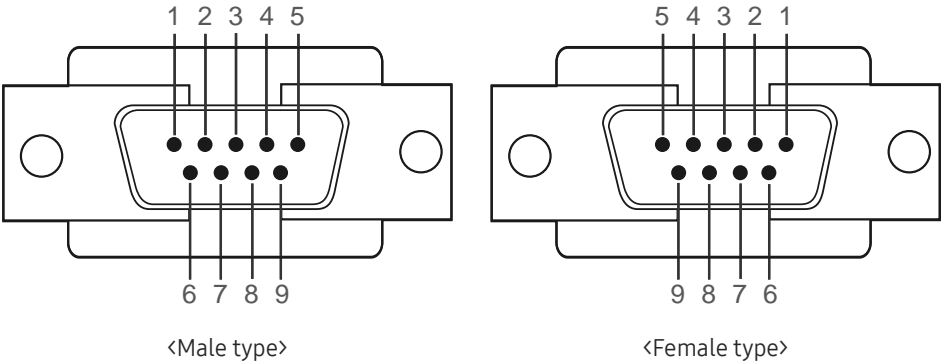
Remote Control (RS232C)

Cable Connection

RS232C Cable

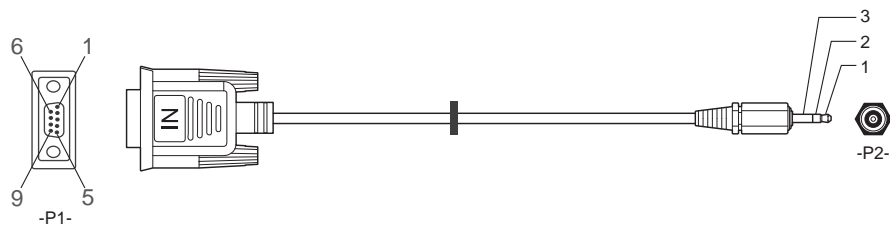
Interface	RS232C (9 pins)
Pin	TxD (No.2), RxD (No.3), GND (No.5)
Bit rate	9600 bps
Data bits	8 bit
Parity	None
Stop bit	1 bit
Flow control	None
Maximum length	15 m (only shielded type)

- Pin assignment



Pin	Signal
1	Detect data carrier
2	Received data
3	Transmitted data
4	Prepare data terminal
5	Signal ground
6	Prepare data set
7	Send request
8	Clear to send
9	Ring indicator

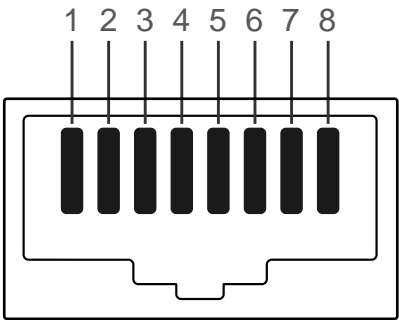
- RS232C cable
Connector: 9-Pin D-Sub to Stereo Cable



-P1-		-P1-		-P2-		-P2-	
Male type	Rx	3	-----	2	Tx	STEREO	
	Tx	2	-----	1	Rx	PLUG	
	Gnd	5	-----	3	Gnd	(3.5ø)	

LAN Cable

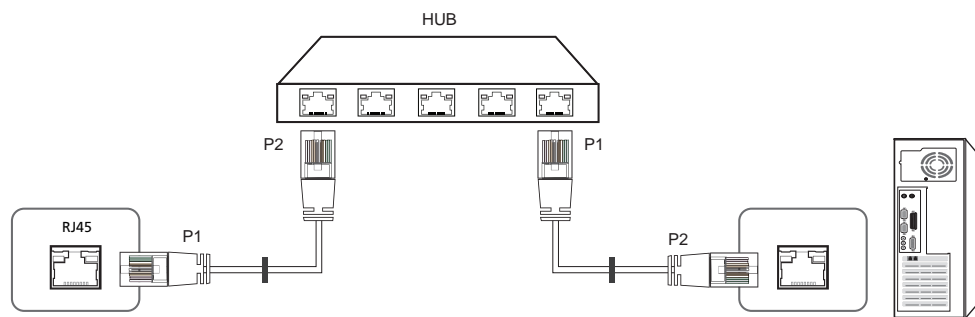
- Pin assignment



Pin No	Standard Colour	Signal
1	White and orange	TX+
2	Orange	TX-
3	White and green	RX+
4	Blue	NC
5	White and blue	NC
6	Green	RX-
7	White and brown	NC
8	Brown	NC

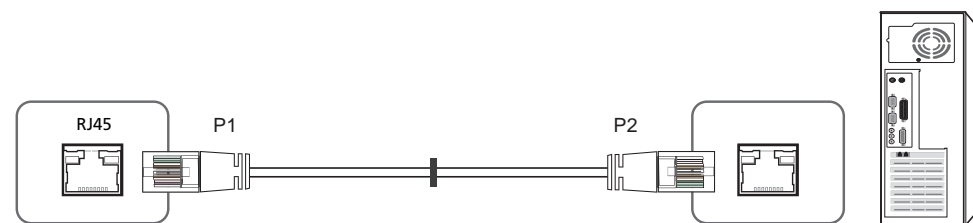
- Connector : RJ45

Direct LAN cable (PC to HUB)



Signal	P1		P2	Signal
TX+	1	<----->	1	TX+
TX-	2	<----->	2	TX-
RX+	3	<----->	3	RX+
RX-	6	<----->	6	RX-

Cross LAN cable (PC to PC)

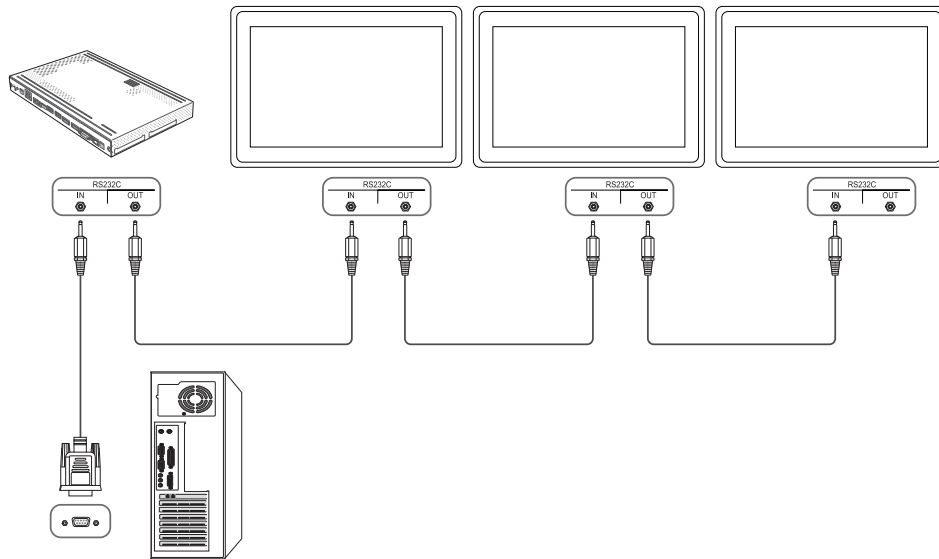


Signal	P1		P2	Signal
TX+	1	<----->	3	RX+
TX-	2	<----->	6	RX-
RX+	3	<----->	1	TX+
RX-	6	<----->	2	TX-

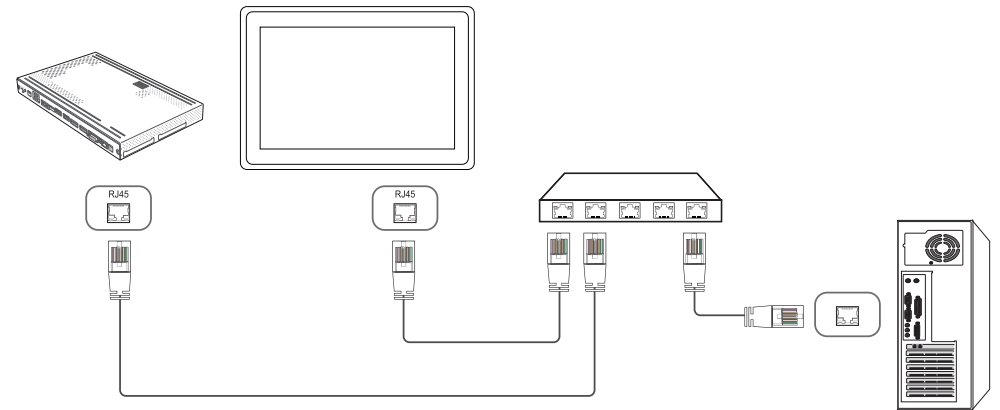
Connection

— Ensure you connect each of the adapters to the correct RS232C IN or OUT port on the product.

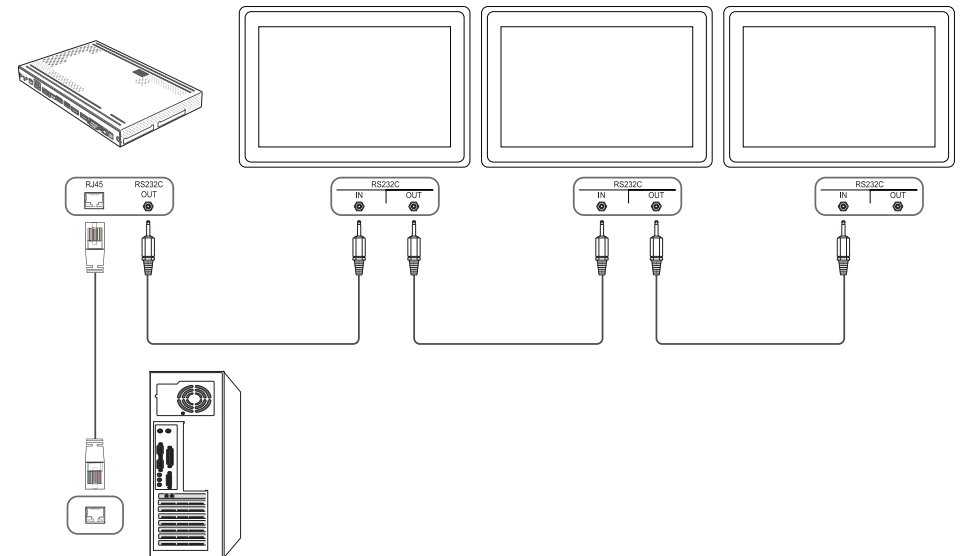
- Connection 1



- Connection 2



- Connection 3



Control Codes

Viewing control state (Get control command)

Header	Command	ID	Data length	Checksum
0xAA	Command type		0	

Controlling (Set control command)

Header	Command	ID	Data length	Data	Checksum
0xAA	Command type		1	Value	

Command

No.	Command type	Command	Value range
1	Power control	0x11	0~1
2	Volume control	0x12	0~100
3	Input source control	0x14	-
4	Safety Lock	0x5D	0~1

- All communications take place in hexadecimals. The checksum is calculated by adding up all values except the header. If a checksum adds up to be more than 2 digits as shown below ($11+FF+01+01=112$), the first digit is removed.

E.g. Power On & ID=0

Header	Command	ID	Data length	Data 1	Checksum
0xAA	0x11		1	"Power"	

Header	Command	ID	Data length	Data 1	Checksum
0xAA	0x11		1	1	12

- To control all devices connected by a serial cable simultaneously irrespective of IDs, set the ID as "0xFE" and transmit commands. Commands will be executed by each device but ACK will not respond.

Power control

- Function
A product can be powered on and off using a PC.
- Viewing power state (Get Power ON / OFF Status)

Header	Command	ID	Data length	Checksum
0xAA	0x11		0	

- Setting power ON/Off (Set Power ON / OFF)

Header	Command	ID	Data length	Data	Checksum
0xAA	0x11		1	"Power"	

"Power": Power code to be set on a product.

1: Power ON

0: Power OFF

- Ack

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'A'	0x11	"Power"	

"Power": Power code to be set on a product.

- Nak

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'N'	0x11	"ERR"	

"ERR" : A code showing what error has occurred.

Volume control

- Function
The volume of a product can be adjusted using a PC.
- Viewing volume state (Get Volume Status)

Header	Command	ID	Data length	Checksum
0xAA	0x12		0	

- Setting the volume (Set Volume)

Header	Command	ID	Data length	Data	Checksum
0xAA	0x12		1	"Volume"	

"Volume": Volume value code to be set on a product. (0-100)

- Ack

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'A'	0x12	"Volume"	

"Volume": Volume value code to be set on a product. (0-100)

- Nak

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'N'	0x12	"ERR"	

"ERR" : A code showing what error has occurred.

Input source control

- Function
The input source of a product can be changed using a PC.
- Viewing input source state (Get Input Source Status)

Header	Command	ID	Data length	Checksum
0xAA	0x14		0	

- Setting the input source (Set Input Source)

Header	Command	ID	Data length	Data	Checksum
0xAA	0x14		1	"Input Source"	

"Input Source": An input source code to be set on a product.

0x0C	Input source
0x20	MagicInfo
0x1F	DVI_video
0x21	HDMI1
0x22	HDMI1_PC
0x23	HDMI2
0x24	HDMI2_PC

- DVI_video, HDMI1_PC and HDMI2_PC cannot be used with the Set command. They only respond to "Get" commands.
- This model does not support HDMI1, HDMI1_PC, HDMI2 and HDMI2_PC ports.
- MagicInfo is only available with models that contain the MagicInfo function.

- Ack

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'A'	0x14	"Input Source"	

"Input Source": An input source code to be set on a product.

- Nak

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'N'	0x14	"ERR"	

"ERR" : A code showing what error has occurred.

Video Wall Mode Control

- Function
Video Wall mode can be activated on a product using a PC.
This control is only available on a product whose Video Wall is enabled.
- Viewing video wall mode (Get Video Wall Mode)

Header	Command	ID	Data length	Checksum
0xAA	0x5C		0	

- Setting the video wall (Set Video Wall Mode)

Header	Command	ID	Data length	Data	Checksum
0xAA	0x5C		1	"Video Wall Mode"	

"Video Wall Mode": A code used to activate Video Wall mode on a product

1: Full

0: Natural

- Ack

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'A'	0x5C	"Video Wall Mode"	

"Video Wall Mode": A code used to activate Video Wall mode on a product

- Nak

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'A'	0x5C	"ERR"	

"ERR": A code showing what error has occurred

Safety Lock

- Function
PC can be used to turn the Safety Lock On function on or off on a product.
This control is available regardless of whether or not the power is turned on.
- Viewing the safety lock state (Get Safety Lock Status)

Header	Command	ID	Data length	Checksum
0xAA	0x5D		0	

- Enabling or disabling safety lock (Set Safety Lock Enable / Disable)

Header	Command	ID	Data length	Data	Checksum
0xAA	0x5D		1	"Safety Lock"	

"Safety Lock": Safety lock code to be set on a product

1: ON

0: OFF

- Ack

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'A'	0x5D	"Safety Lock"	

"Safety Lock": Safety lock code to be set on a product

- Nak

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'N'	0x5D	"ERR"	

"ERR": A code showing what error has occurred

Video Wall On

- Function
Turn Video Wall on or off on the product from your computer.
- Get Video Wall On/Off Status

Header	Command	ID	Data length	Checksum
0xAA	0x84		0	

- Set Video Wall On/Off

Header	Command	ID	Data length	Data	Checksum
0xAA	0x84		1	V.Wall_On	

- V.Wall_On: Video Wall code to be assigned to the product

1: Video Wall ON

0: Video Wall OFF

- Ack

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'A'	0x84	V.Wall_On	

V.Wall_On : Same as above

- Nak

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'N'	0x84	ERR	

"ERR": A code showing what error has occurred

Video Wall User Control

- Function
Turn the Video Wall function on or off on the product from your computer.
- Get Video Wall Status

Header	Command	ID	Data length	Checksum
0xAA	0x89		0	

- Set Video Wall

Header	Command	ID	Data length	Val1	Val2	Checksum
0xAA	0x89		2	Wall_Div	Wall_SNo	

Wall_Div: Video Wall Divider code assigned to the product

10x10 Video Wall Model

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Off	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x00
1	0x11	0x12	0x13	0x14	0x15	0x16	0x17	0x18	0x19	0x1A	0x1B	0x1C	0x1D	0x1E	0x1F
2	0x21	0x22	0x23	0x24	0x25	0x26	0x27	0x28	0x29	0x2A	0x2B	0x2C	0x2D	0x2E	0x2F
3	0x31	0x32	0x33	0x34	0x35	0x36	0x37	0x38	0x39	0x3A	0x3B	0x3C	0x3D	0x3E	0x3F
4	0x41	0x42	0x43	0x44	0x45	0x46	0x47	0x48	0x49	0x4A	0x4B	0x4C	0x4D	0x4E	0x4F
5	0x51	0x52	0x53	0x54	0x55	0x56	0x57	0x58	0x59	0x5A	0x5B	0x5C	0x5D	0x5E	0x5F
6	0x61	0x62	0x63	0x64	0x65	0x66	0x67	0x68	0x69	0x6A	0x6B	0x6C	0x6D	0x6E	0x6F
7	0x71	0x72	0x73	0x74	0x75	0x76	0x77	0x78	0x79	0x7A	0x7B	0x7C	0x7D	0x7E	N/A
8	0x81	0x82	0x83	0x84	0x85	0x86	0x87	0x88	0x89	0x8A	0x8B	0x8C	N/A	N/A	N/A
9	0x91	0x92	0x93	0x94	0x95	0x96	0x97	0x98	0x99	0x9A	0x9B	N/A	N/A	N/A	N/A
10	0xA1	0xA2	0xA3	0xA4	0xA5	0xA6	0xA7	0xA8	0xA9	0xAA	N/A	N/A	N/A	N/A	N/A
11	0xB1	0xB2	0xB3	0xB4	0xB5	0xB6	0xB7	0xB8	0xB9	N/A	N/A	N/A	N/A	N/A	N/A
12	0xC1	0xC2	0xC3	0xC4	0xC5	0xC6	0xC7	0xC8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
13	0xD1	0xD2	0xD3	0xD4	0xD5	0xD6	0xD7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
14	0xE1	0xE2	0xE3	0xE4	0xE5	0xE6	0xE7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
15	0xF1	0xF2	0xF3	0xF4	0xF5	0xF6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Wall_SNo: Product Number code assigned to the product

10x10 Video Wall Model : (1 ~ 100)

Set Number	Data
1	0x01
2	0x02
...	...
99	0x63
100	0x64

- Ack

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Val2	Checksum
0xAA	0xFF		4	'A'	0x89	Wall_Div	Wall_SNo	

- Nak

Header	Command	ID	Data length	Ack/Nak	r-CMD	Val1	Checksum
0xAA	0xFF		3	'N'	0x89	ERR	

"ERR": A code showing what error has occurred

Chapter 03

Connecting and Using a Source Device

Before Connecting

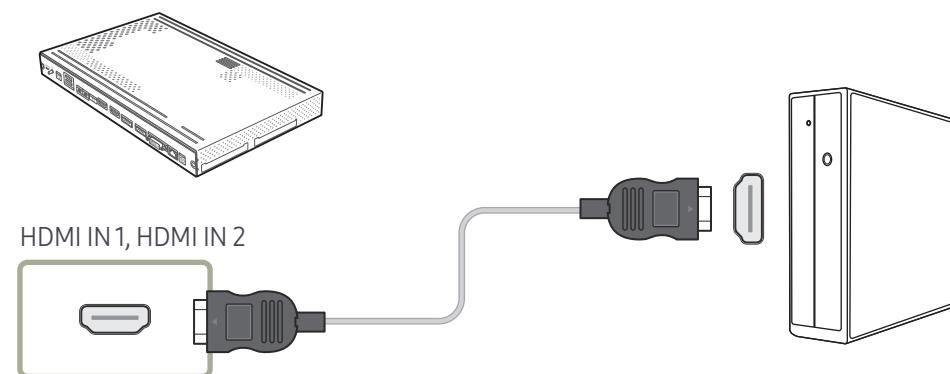
Pre-connection Checkpoints

- Before connecting a source device, read the user manual provided with it.
The number and locations of ports on source devices may differ from device to device.
- Do not connect the power cable until all connections are completed.
Connecting the power cable during connection may damage the product.
- Connect the sound ports correctly: left = white and right = red.
- Check the types of ports at the back of the product you want to connect.

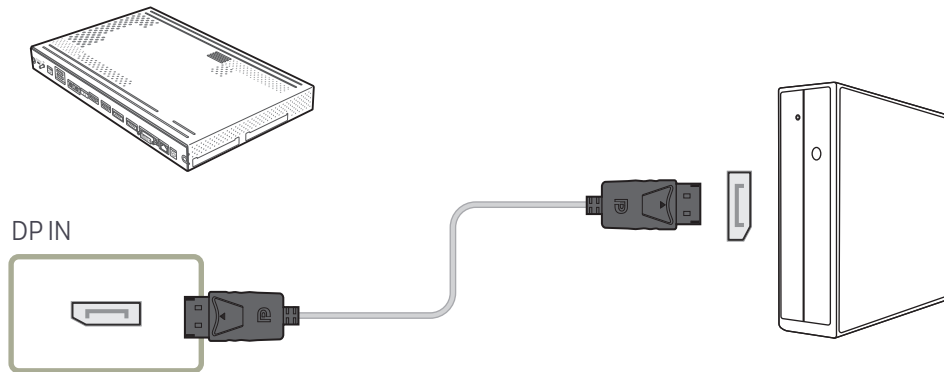
Connecting to a PC

- Do not connect the power cable before connecting all other cables.
Ensure you connect a source device first before connecting the power cable.
 - A PC can be connected to the product in a variety of ways.
Select a connection method suitable for your PC.
- Connecting parts may differ in different products.

Connection Using an HDMI Cable



Connection Using an DP Cable



- Precautions for using DP
 - Some graphics cards that are not compliant with the DP standard may prevent the Windows Booting/Bios screen from being displayed when the product is in power-saving mode. If this is the case, make sure to turn on the product first before turning on your PC.
 - The interface **DP IN** on the product and the provided DP cable are designed based on the VESA standards. Using a DP cable that is not VESA compliant may cause the product to function improperly. Samsung Electronics shall not be held responsible for any issues from using a cable that is not VESA compliant.
Make sure to use a DP cable that is VESA compliant.
 - To use the optimal resolution (3840x2160 @ 60Hz) when the input source is **DisplayPort**, using a DP cable shorter than 5m is recommended.
 - Disabling power-saving mode when the input source is **DisplayPort** may import new resolution information and reset the task window size or location.

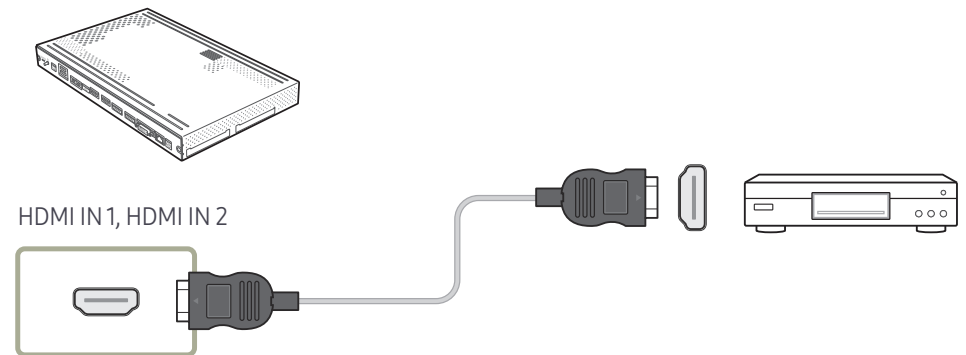
Connecting to a Video Device

- Do not connect the power cable before connecting all other cables.
Ensure you connect a source device first before connecting the power cable.
- You can connect a video device to the product using a cable.
 - Connecting parts may differ in different products.
 - Press the **SOURCE** button on the remote control to change the source.

Connection Using an HDMI Cable

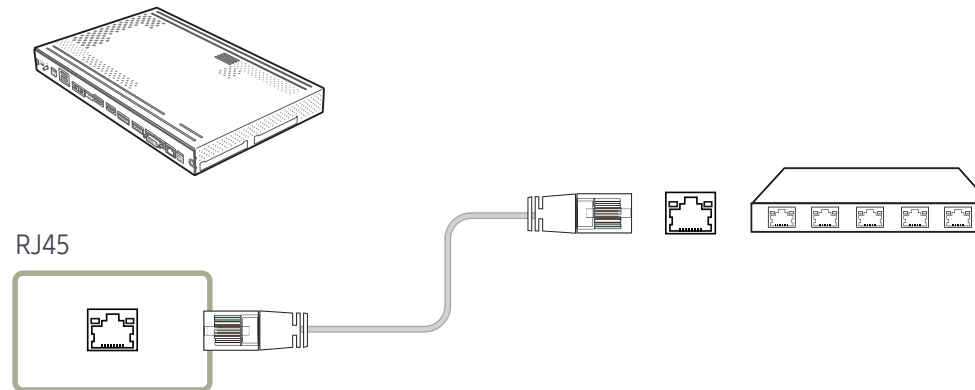
Using an HDMI cable

- For better picture and audio quality, connect to a digital device using an HDMI cable.
- An HDMI cable supports digital video and audio signals, and does not require an audio cable.
- The picture may not display normally (if at all) or the audio may not work if an external device that uses an older version of HDMI mode is connected to the product. If such a problem occurs, ask the manufacturer of the external device about the HDMI version and, if out of date, request an upgrade.
- Be sure to use an HDMI cable with a thickness of 14 mm or less.
- Be sure to purchase a certified HDMI cable. Otherwise, the picture may not display or a connection error may occur.
- A basic high-speed HDMI cable or one with ethernet is recommended.
This product does not support the ethernet function via HDMI.



Connecting the LAN Cable

— Connecting parts may differ in different products.



- Use Cat7(*STP Type) cable for the connection.
*Shielded Twisted Pair

Changing the Input source

Source

☰ SOURCE → Source



– The displayed image may differ depending on the model.

Source allows you to select a variety of sources and change source device names.

You can display the screen of a source device connected to the product. Select a source from source list to display the screen of the selected source.

- The input source can also be changed by using the **SOURCE** button on the remote control.
- The screen may not display correctly if an incorrect source is selected for the source device you want to convert to.

Edit

☰ SOURCE → Source → ▲ → Edit → ↩

Edit the name and device type of a connected external device.

- The list can include the following source devices. Source devices on the list differ depending on the selected source.
HDMI 1 / HDMI 2 / DisplayPort / Cable Box / Game Console / PC / Blu-ray player
- You cannot edit the following sources.
MagicInfo S / URL Launcher / Web Browser

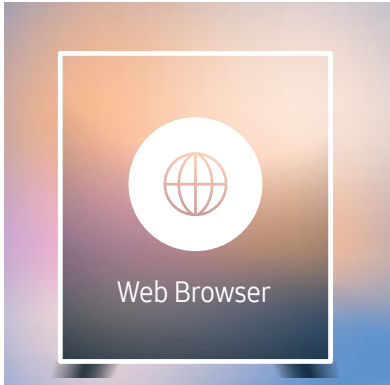
Information

INFO

You can see detailed information about the selected external device.

Web Browser

☞ SOURCE → Source → Web Browser → ☞



- The displayed image may differ depending on the model.
- Connect a LAN cable to access Internet from the product, similar to accessing the Internet from a computer.

Settings

☞ SOURCE → Source → Web Browser → ▲ → Settings → ☞

General

Hide Tabs and Toolbar automatically

If the browser tabs, menu or toolbar are not used for a while, they will automatically disappear. To make them appear again, move the pointer or focus to the top of the screen.

- Use / Do not use

Pop-up Blocker

Make your browsing experience more pleasant by blocking pop-up windows.

- Use / Do not use

Reset Settings

All your customised web browser settings will be reset to their default values. Your bookmarks and history won't be affected.

Search Engine

If you enter a keyword in the URL/keyword input field, Web Browser will open the Search Results page.

Choose the search engine you want to use.

- Google / Bing

Privacy & Security

Security Mode

Provide warnings about unsafe pages or block access to enhance Web Browser security.
This may slow the Web Browser down.

- Use / Do not use

Private Browsing

When Private Browsing is active, your browsing history won't be recorded.

- Use / Do not use

Do Not Track

Ask websites not to track you.

- Use / Do not use

JavaScript

Allow all sites to run JavaScript for a better browsing experience.

- Use / Do not use

Clear History

Clear your entire browsing history.

Delete browsing data

Delete all browsing data such as cookies, cached images and data.
Your Bookmarks and History won't be affected.

Blocked pages

Blocked pages

Block access to pages that you have listed in Blocked pages.

- Use / Do not use

List of Blocked Pages

Block or unblock specific pages.

- Add

Approved pages

Approved pages

Enable web access only to pages that you have approved.

- Use / Do not use

Password for Approved pages

Set a password for managing Approved pages.

- Set Password

List of Approved Pages

Approve specific pages or remove them from Approved pages.

- Add

Encoding

Encoding

Choose an encoding method for web pages. The current setting is Auto.

- Auto / Manual (Current : Unicode)

Refresh Options

☞ SOURCE → Source → Web Browser → ▲ → Refresh Options → ☞

Refresh Interval

Set the time for the web browser to wait before returning to the home page.

- Off / 5 min / 10 min / 15 min / 30 min

Zoom

Set the zoom scale to apply when the web browser is refreshed.

- 50% / 75% / 100% / 125% / 150%

Home Page

Set the website to display when the web browser is refreshed.

- Samsung Display / Custom

Custom

Enter the URL to set as the home page.

- Enter URL
 - Available only when Home Page is set to Custom.

Chapter 04

Using MDC

Multiple display control "MDC" is an application that allows you to easily control multiple display devices simultaneously using a PC.

- For details on how to use the MDC programme, refer to Help after installing the programme. The MDC programme is available on the website.

MDC Programme Installation/Uninstallation

Installation

— MDC installation can be affected by the graphics card, mother board and network conditions.

- 1 Click the **MDC Unified** installation programme.
- 2 Select a language for installation. Next, click **"OK"**.
- 3 When the **"Welcome to the InstallShield Wizard for MDC_Unified"** screen appears, click **"Next"**.
- 4 In the **"License Agreement"** window displayed, select **"I accept the terms in the license agreement"** and click **"Next"**.
- 5 In the displayed **"Customer Information"** window, fill out all the information fields and click **"Next"**.
- 6 In the displayed **"Destination Folder"** window, select the directory path you want to install the programme in and click **"Next"**.

— If the directory path is not specified, the programme will be installed in the default directory path.

- 7 In the displayed **"Ready to Install the Program"** window, check the directory path to install the programme in and click **"Install"**.
- 8 Installation progress will be displayed.
- 9 Click **"Finish"** in the displayed **"InstallShield Wizard Complete"** window.
 - Select **"Launch MDC Unified"** and click **"Finish"** to run the MDC programme immediately.
- 10 The **MDC Unified** shortcut icon will be created on the desktop after installation.
 - The MDC execution icon may not be displayed depending on the PC system or product specifications.
 - Press F5 if the execution icon is not displayed.

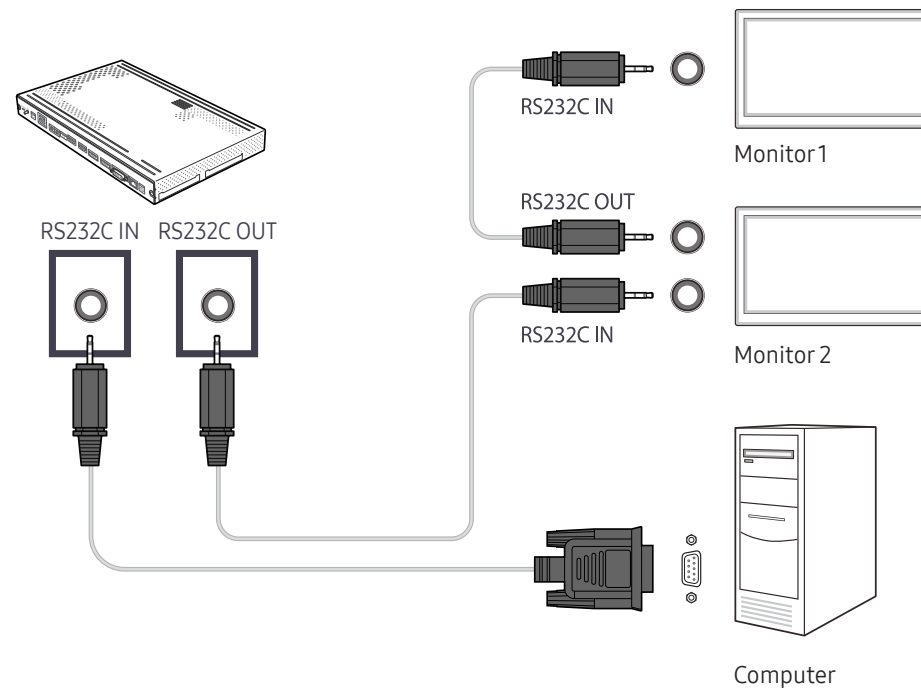
Uninstallation

- 1 Select **Settings > Control Panel** on the **Start** menu and double-click **Add/Delete Program**.
- 2 Select **MDC Unified** from the list and click **Change/Remove**.

Connecting to MDC

Using MDC via RS-232C (serial data communications standards)

An RS-232C serial cable must be connected to the serial ports on the PC and monitor.

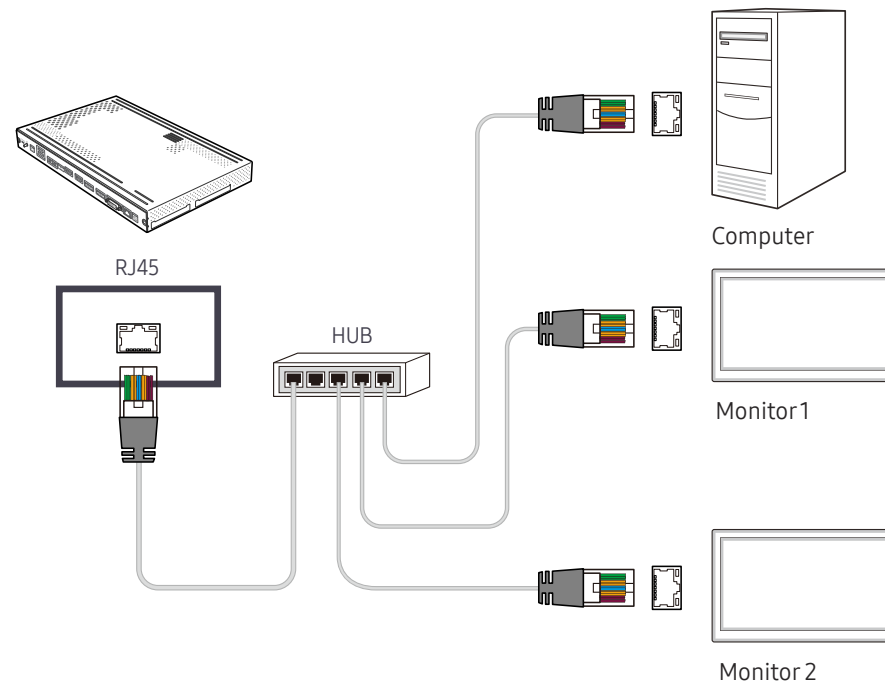


Using MDC via Ethernet

Enter the IP for the primary display device and connect the device to the PC. Display devices can be connected to each other using a LAN cable.

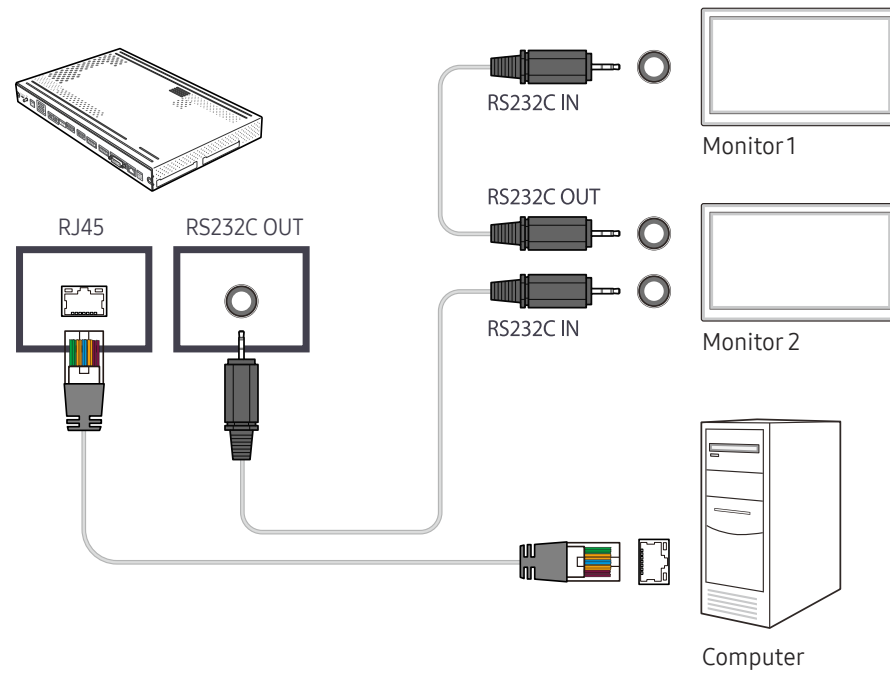
Connection using a direct LAN cable

— Multiple products can be connected using the RJ45 port on the product and the LAN ports on the HUB.



Connection using a cross LAN cable

— Multiple products can be connected using the RS232C IN / OUT port on the product.



Chapter 05

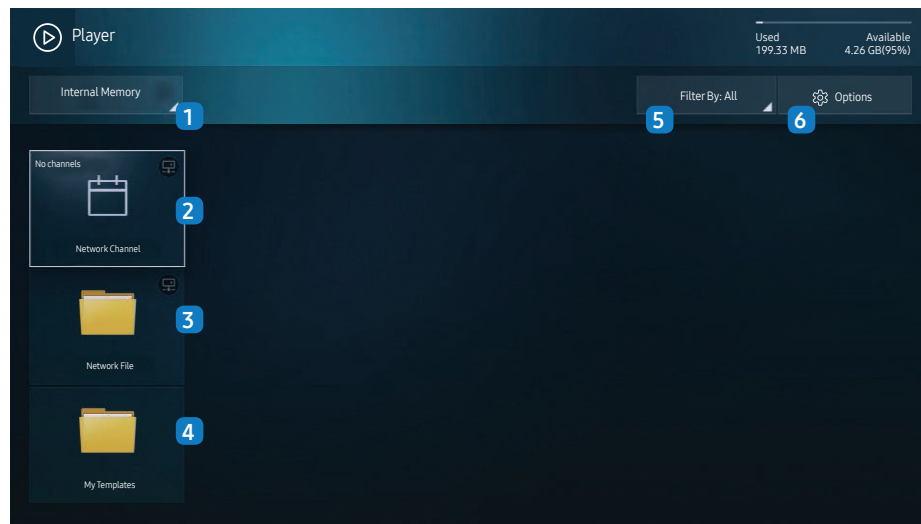
Player feature

Accessible using the  button on the remote control.

Player

 → **Player** → 

Play a range of content such as channels with schedules assigned, templates or files.



- The displayed image may differ depending on the model.
- To use the **Player** feature, set **Play via** to **MagicInfo** in **System**.

No.	Description
1	Select between internal or external memory.
2	Play content, templates and schedules configured on the server. <ul style="list-style-type: none">• You can view whether the server is connected (approval) in the Player screen. To view whether the server is connected when a Network Channel is running, press INFO on the remote.
1	Select Network Channel from the Player screen. The No channels message appears if no channel has been registered in Network Channel .
2	Network Channel will run.
3	Play content stored on the server.
4	Play a template stored in the internal memory.
5	Select a content type as criterion to search for a desired content list.
6	Set different options for Player .

Viewing content

1 Select either internal or external memory. The files saved in the selected memory appear.

2 Select the desired file. The content appears on the screen. (For more information on compatible file formats, see the “File formats compatible with Player” section.)

When content is running

Control buttons on the remote

You can use buttons on your remote control to play, pause, or skip between content on the playlist.

Button	Function
TOOLS	Brings up the menu bar.
INFO	Displays the information of the content.
▶	Goes to next file or page.
◀	Goes to previous file or page.
⏮ / ▶ / ⏭	Plays or pauses slide show or video content.
■	Stops displaying content and goes to the Player screen.
◀◀	Rewinds the video content.
▶▶	Fast forwards the video content.

Available menu

Press the TOOLS button on the remote control during content playback to configure settings.

Menu	Description
Playlist	View a list of content items currently playing.
Channel List	Network Channel / Internal Channel
Sound Mode	Customises the audio settings for the content currently playing.
Repeat	Set the repeat mode.
Background Music	Set the background music to be played when content is running.
Reset	Reset the background music.
Pause	Pause the background music.
Prev	Play the previous background music on the list.
Next	Play the next background music on the list.

— **Reset, Pause, Prev, Next** only appear when the background music is set.

File Formats Compatible with Player

- Supported file systems include FAT32 and NTFS.
- A file with a vertical and horizontal resolution larger than the maximum resolution cannot be played.
Check the vertical and horizontal resolution of the file.
- Check the supported video and audio Codec types and Versions.
- Check the supported file versions.
 - PowerPoint version up to 97 – 2007 is supported
- Only the last USB device that was connected is recognised.

Network Schedule Multiframe

Playback restrictions

- A maximum of two video files (**Video**) can be played simultaneously.
- In portrait playback mode, only one video file can be played at a time.
- For **Office** files (PPT and Word files) and **PDF** files, only one file type is supported at a time.
- LFD(.lfd) files are not supported.

Sound output restrictions

- More than one sound output cannot be used.
- Playback priority: network BGM > local BGM > video file in the main frame selected by the user
 - Network BGM: Settings can be configured in step 1 when creating a server schedule.
 - Local BGM: BGM settings can be configured using the tools displayed after the **TOOLS** button is pressed during **Player** playback.
 - User-selected main frame: Main frame settings can be configured in step 2 when creating a server schedule.

Template files and LFD(.lfd) files

Restrictions

- Ensure a distributed folder (content / schedules) exists in **Internal** / **USB** memory.

Playback restrictions

- A maximum of two video (**Video**) files can be played.
- For **Office** files (PPT and Word files) and **PDF** files, only one file type is supported at a time.
- Multiple videos (**Video**) cannot be played on a single display of a video wall simultaneously.

Sound output restrictions

- More than one sound output cannot be used.
- Playback priority: network BGM > local BGM > video file in the main frame selected by the user

Contents

File Extension	Container	Video Codec	Resolution	Frame rate (fps)	Bit rate (Mbps)	Audio Codec
*.avi	AVI	H.264 BP/MP/HP	4096x2160	4096X2160: 24	40	AC3
*.mkv	MKV			3840X2160: 30		LPCM
*.asf	ASF	HEVC (H.265 - Main, Main10, Main4:2:2 10)		60	80	ADPCM(IMA, MS)
*.wmv	MP4	Motion JPEG		30	80	AAC
*.mp4	3GP	MVC	1920 x 1080	60	20	HE-AAC
*.mov	MOV	Divx 3.11 / 4 / 5 / 6				WMA
*.3gp	FLV	MPEG4 SP/ASP				DD+
*.vro	VRO	MPEG4 SP/ASP				MPEG(MP3)
*.mpg	VOB	Window Media Video v9 (VC1)				DTS (Core , LBR)
*.mpeg	PS	MPEG2				G.711(A-Law, μ -Law)
*.ts	TS	MPEG1				
*.tp	SVAF	MPEG1				
*.trp		Microsoft MPEG-4 v1, v2, v3		30	20	
*.mov		Window Media Video v7(WMV1),v8(WMV2)				
*.flv		H 263 Sorenson				
*.vob		VP6				
*.svi						
*.m2ts						
*.mts						
*.divx						
*.webm	WebM	VP8	1920x1080	90	20	Vorbis
		VP9	4096x2160	4096X2160: 24 3840X2160: 30	20	
*.rmvb	RMVB	RV8/9/10 (RV30/40)	1920x1080	60	20	RealAudio 6

Video

Audio

Image

- 3D video is not supported.
- Content with a resolution larger than the resolution specified in the table above is not supported.
- Video content with a Bit rate or Frame rate larger than the rate specified in the table above can cause choppy video during playback.
- Video content will not play, or not play correctly, if there is an error in the content or the container.
- Some USB/digital camera devices may not be compatible with the player.
- Supports up to H.264, Level 4.1
- H.264 FMO / ASO / RS, VC1 SP / AP L4 and AVCHD are not supported.
- For all Video codecs except MVC, VP8, VP6:
 - Below 1280 x 720: 60 frame max
 - Above 1280 x 720: 30 frame max
- GMC 2 or higher is not supported.
- Supports only BD MVC Spec.
- Only one video file can play at a time if video files on the monitor use incompatible codecs or the resolution is 1080 x 1920.
- When a single video file is playing, Seamless mode is not supported under the following conditions:
 - Incompatible codec (MVC, VP3, MJPEG) ↔ Incompatible codec
 - Incompatible codec ↔ Compatible codec
 - The resolution is different from that of the monitor
 - The frequency is different from that of the monitor

- Audio content with a Bit rate or Frame rate larger than the rate specified in the table above can cause choppy audio during playback.
- Audio content will not play, or not play correctly, if there is an error in the content or the container.
- Some USB/digital camera devices may not be compatible with the player.
- Supports up to WMA 10 Pro 5.1 channel. WMA lossless audio is not supported.
- QCELP, AMR NB/WB are not supported.

- Compatible image file format : JPEG, PNG, BMP
 - 32-bit, 24-bit and 8-bit BMP files are supported.
- Supported maximum resolution : 4096 x 4096
- Supported maximum file size: 20MB
- Supported image effects : 9 effects
(**Fade1, Fade2, Blind, Spiral, Checker, Linear, Stairs, Wipe, Random**)

Power Point

PDF

WORD

<ul style="list-style-type: none">• Compatible document file formats<ul style="list-style-type: none">– Extension : ppt, pptx– Version : Office 97 ~ Office 2007• Functions not supported<ul style="list-style-type: none">– Animation effect– 3D shapes (which will be displayed in 2D)– Header and footer (some subitems are not supported)– Word Art– Align<ul style="list-style-type: none">A group alignment error may occur– Office 2007<ul style="list-style-type: none">SmartArt is not fully supported. 97 out of 115 subitems are supported.– Object insertion– Half-width characters– Letter spacing– Charts– Vertical text<ul style="list-style-type: none">Some subitems are not supported– Slide notes and handout	<ul style="list-style-type: none">• Compatible document file formats<ul style="list-style-type: none">– Extension : pdf• Functions not supported<ul style="list-style-type: none">– Content less than 1 pixel not supported because of performance degradation issue.– Masked Image, Tiled Image content not supported.– Content with Rotated Text, not supported.– 3D Shadow Effects not supported.– Some characters not supported (Special characters may be corrupted)	<ul style="list-style-type: none">• Compatible document file formats<ul style="list-style-type: none">– Extension : .doc, .docx– Version : Office 97 ~ Office 2007• Functions not supported<ul style="list-style-type: none">– Page background effect– Some paragraph styles– Word Art– Align<ul style="list-style-type: none">A group alignment error may occur– 3D shapes (which will be displayed in 2D)– Office 2007<ul style="list-style-type: none">SmartArt is not fully supported. 97 out of 115 subitems are supported.– Charts– Half-width characters– Letter spacing– Vertical text<ul style="list-style-type: none">Some subitems are not supported– Slide notes and handout
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Template files

LFD

- | | |
|--|--|
| <ul style="list-style-type: none">• Creation/editing/playback are only available in Template. | <ul style="list-style-type: none">• Supported in Network Channel• Compatible document file formats<ul style="list-style-type: none">– Extension : .lfd |
|--|--|

File Formats Compatible with Video Wall

— Refer to the <MagicInfo Server user's manual> for further details.

Video

- 3D video is not supported.
- Content with a resolution larger than the resolution specified in the table above is not supported.
- Video content with a Bit rate or Frame rate larger than the rate specified in the table above can cause choppy video during playback.
- Video content will not play, or not play correctly, if there is an error in the content or the container.
- Some USB/digital camera devices may not be compatible with the player.
- Supports up to H.264, Level 4.1
- H.264 FMO / ASO / RS, VC1 SP / MP / AP L4 and AVCHD are not supported.
- For all Video codecs except MVC, VP8, VP6:
 - Below 1280 x 720: 60 frame max
 - Above 1280 x 720: 30 frame max
- GMC 2 or higher is not supported.
- Supports only BD MVC Spec.
- Some codecs may not be supported in portrait playback mode.

Image

- Compatible image file format : Jpeg, bmp, png
- Supported maximum resolution : 15,360 x 8,640
 - A higher resolution image may take longer to display on the screen.

Restrictions

- Only one video (**Video**) file can be played per client.
 - Different content files can be played on the displays of a video wall.
 - Two video (**Video**) files cannot be played on a single display of a video wall.



Available



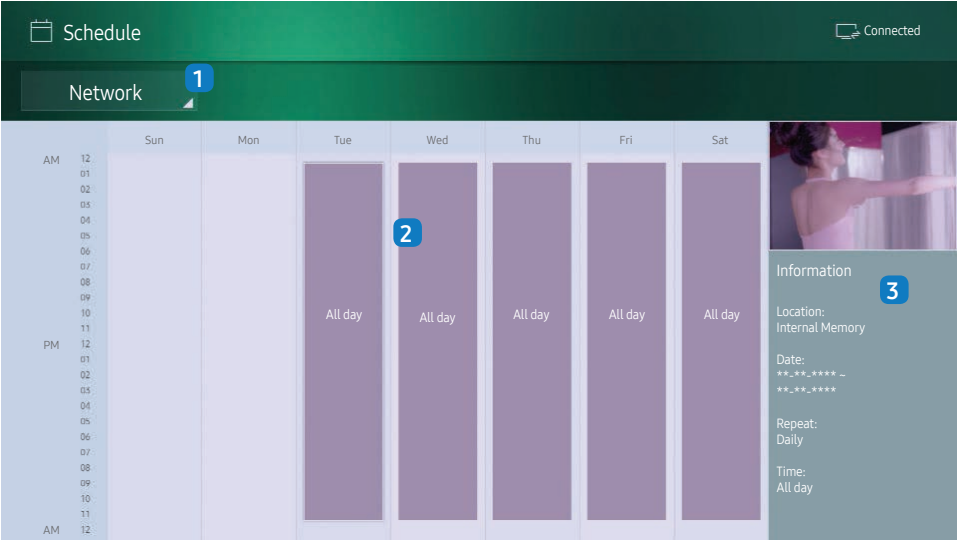
Available



Not available

Schedule

Home → Schedule →



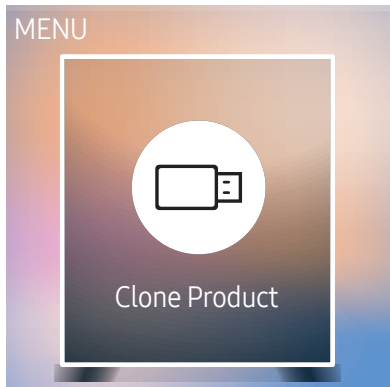
You can check the content’s playback schedule on the server, imported from an external storage, or on a mobile device.

No.	Description
1	Select between server and external memory.
2	View weekly schedule of content playback. Select to view detailed information of each event.
3	View a thumbnail image and brief information of the content.

– The displayed image may differ depending on the model.

Clone Product

🏠 → Clone Product → 🖨️



– The displayed image may differ depending on the model.

Export settings on the product to an external storage device. You can also import settings from an external storage device.

This option is useful when assigning the same settings to several products.

When a duplicate file is not found on the external storage device

- 1 Connect the external storage device, then run the **Clone Product** function.
- 2 The **No cloning file found on the external storage device. Export this device's settings to the external storage device?** message appears.

When a duplicate file is found on the external storage device

- 1 Connect the external storage device, then run the **Clone Product** function.
- 2 The **Cloning file found. Please select an option.** message appears.

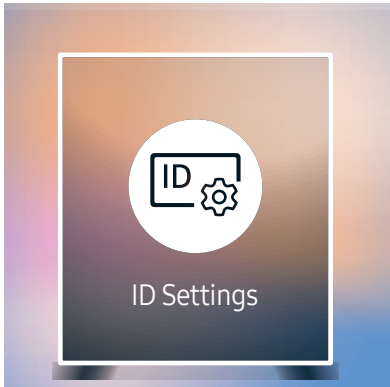
Run the **Clone from External Storage Device** or **Clone to External Storage Device** function.

- **Clone from External Storage Device:** Copy settings saved on an external storage device to the product.
- **Clone to External Storage Device:** Copy settings on the product to an external storage device.

– After configuration is complete, the product is rebooted automatically.

ID Settings

🏠 → ID Settings → 📄




– The displayed image may differ depending on the model.

Assign an ID to a set.

Device ID

Enter the ID number of the product connected to the input cable for input signal reception. (Range: 0~224)

- Press ▲/▼ to select a number, and press .
- Enter the number you want using the number buttons on the remote control.

Device ID Auto Set

This feature automatically allots an ID number to a device connected via an RS232C cable.

When multiple devices are connected, enable the feature on either the first or last device.

- This function is only available on the first device within an RS-232C daisy chain.

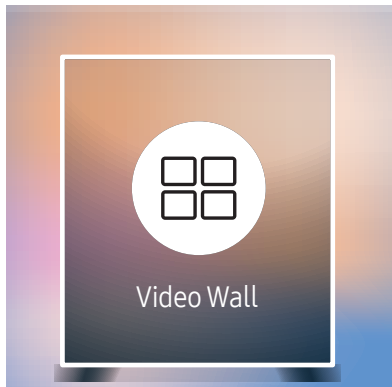
PC Connection Cable

Select a method to connect to MDC to receive the MDC signal.

- **RS232C cable**
Communicates with the MDC via a RS232C cable.
- **RJ-45 (LAN)/Wi-Fi Network**
Communicate with MDC via the RJ45 cable.

Video Wall

🏠 → Video Wall → 🖥️



– The displayed image may differ depending on the model.

Customise the layout of multiple displays that are connected to form a video wall.

In addition, display part of a whole picture or repeat the same picture on each of the connected multiple displays.

To display multiple images, refer to MDC Help or the MagicInfo user guide. Some models may not support the MagicInfo function.

Video Wall

You can activate or deactivate **Video Wall**.

To organise a video wall, select **On**.

- **Off / On**

Horizontal x Vertical

This feature automatically splits a videowall display based on a videowall matrix configuration.

Enter the videowall matrix.

The videowall display is split based on the configured matrix. The number of vertical or horizontal display devices can be set within the range 1 and 15.

- A videowall display can be split into a maximum of 100 screens.
- The **Horizontal x Vertical** option is only enabled when **Video Wall** is set to **On**.

Screen Position

To rearrange split screens, adjust the number for each product in the matrix using the **Screen Position** feature.

Selecting **Screen Position** will display the videowall matrix with the numbers assigned to the products that form the videowall.

To rearrange products, use the direction buttons on the remote control to move a product to another desired number. Press the **↻** button.

- **Screen Position** allows you to split the screen into a maximum of 100 views (15x15). The maximum number of views that can be split when products are connected via DP Loopout is also 100.
- The **Screen Position** option is only enabled when **Video Wall** is set to **On**.
- To use the function, make sure **Horizontal x Vertical** is configured.

Format

Select how to display images on the videowall display.

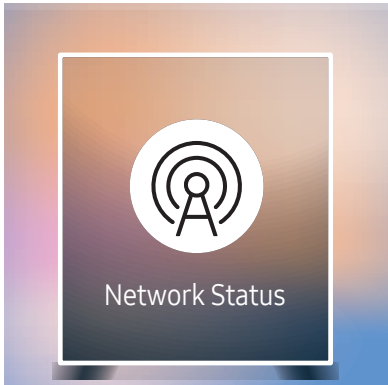
- **Full:** Display images in full screen with no margin.
- **Natural:** Display images in the original aspect ratio without enlarging or reducing the size.

— The **Format** option is only enabled when **Video Wall** is set to **On**.

Network Status

Check the current network and Internet connection.

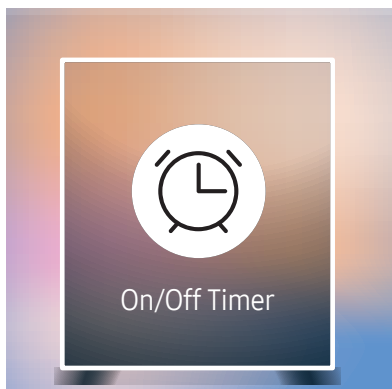
🏠 → Network Status → 🖨️



– The displayed image may differ depending on the model.

On/Off Timer

🏠 → On/Off Timer → 🖨



– The displayed image may differ depending on the model.

— You must set **Clock Set** before you can use this feature.

On Timer

Set **On Timer** so that your product turns on automatically at a time and on a day of your choosing.

The power is turned on with the specified volume or input source.

On Timer: Set the on timer by making a selection from one of the seven options. Ensure you set the current time first.

(On Timer1 ~ On Timer7)

- **Setup:** Select **Off**, **Once**, **Everyday**, **Mon~Fri**, **Mon~Sat**, **Sat~Sun** or **Manual**.
If you select **Manual**, you can choose the days you want **On Timer** to turn on your product.
 - The check mark indicates days you've selected.
- **Time:** Set the hour and minute. Use the number buttons or the up and down arrow keys to enter numbers. Use the left and right arrow buttons to change entry fields.
- **Volume:** Set the desired volume level. Use the left and right arrow buttons to change the volume level.
- **Source:** Select the input source of your choice.
- **Content** (when the **Source** is set to **Internal/USB**): From the USB device or internal memory device, select a folder containing content you want to play when the product turns on. Content can include music, photo or video files.

— This function is available only when a USB device is connected.

— If there is no music file on the USB device or you don't select a folder containing a music file, the Timer function does not operate correctly.

— If there is only one photo file in the USB, the **Slide Show** will not play.

— If a folder name is too long, the folder cannot be selected.

— Each USB you use is assigned its own folder. When using more than one of the same type of USB, make sure the folders assigned to each USB have different names.

— We recommend that you use a USB memory stick and a multi card reader when using **On Timer**.

— The **On Timer** function may not work with USB devices with a built-in battery, MP3 players, or PMPs made by some manufacturers because the product can take too long to recognise these devices.


Off Timer

Set the off timer (**Off Timer**) by making a selection from one of the seven options. (**Off Timer 1 ~ Off Timer 7**)

- **Setup:** Select **Off**, **Once**, **Everyday**, **Mon~Fri**, **Mon~Sat**, **Sat~Sun** or **Manual**.
If you select **Manual**, you can choose the days you want **Off Timer** to turn off your product.
 - The check mark indicates days you've selected.
- **Time:** Set the hour and minute. Use the number buttons or the up and down arrow keys to enter numbers. Use the left and right arrow buttons to change entry fields.

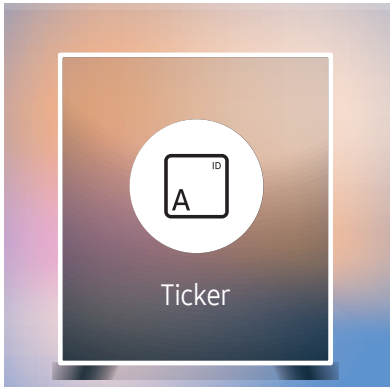
Holiday Management

Timer will be disabled during a period specified as a holiday.

- **Add Holiday:** Specify the period you want to add as a holiday.
Select the start and end dates of the holiday you want to add using the ▲/▼ buttons, and click the **Done** button.
The period will be added to the list of holidays.
 - **Start:** Set the start date of the holiday.
 - **End:** Set the end date of the holiday.
- **Delete:** Delete selected items from the list of holidays.
- **Edit:** Select a holiday item and then change the date.
- **Set Applied Timer:** Set the **On Timer** and **Off Timer** to not activate on public holidays.
 - Press  to select the **On Timer** and **Off Timer** settings you do not want to activate.
 - The selected **On Timer** and **Off Timer** will not activate.

Ticker

🏠 → Ticker → 📄



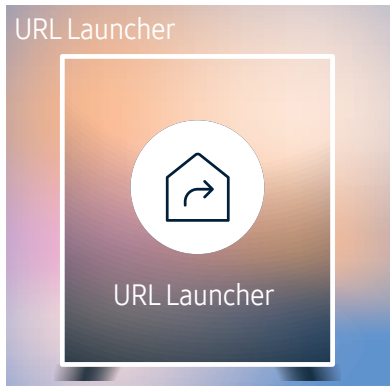
Input text while a video or image is displayed and display the text on the screen.

- **Off / On**
- **Message:** Enter a message to display on the screen.
- **Time:** Set the **Start Time** and **End Time** to display a **Message**.
- **Font options:** Specify the text font and colour for the message.
- **Position:** Select an orientation to display a **Message**.
- **Scroll:** Specify the scroll **Direction** and **Speed** for the message.
- **Preview:** Preview configured caption settings.

– The displayed image may differ depending on the model.

URL Launcher

🏠 → URL Launcher → 🖼️



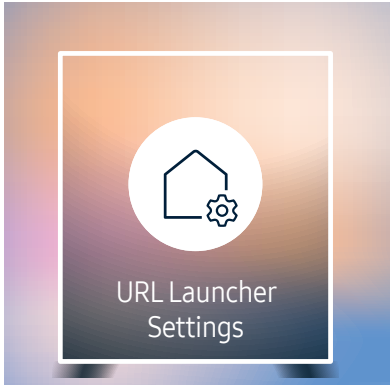
For details on how to use the **URL Launcher** feature, contact the dealer the product was purchased from.

— To use the **URL Launcher** feature, set **Play via** to **URL Launcher** in **System**.

– The displayed image may differ depending on the model.

URL Launcher Settings

🏠 → URL Launcher Settings → ⏪

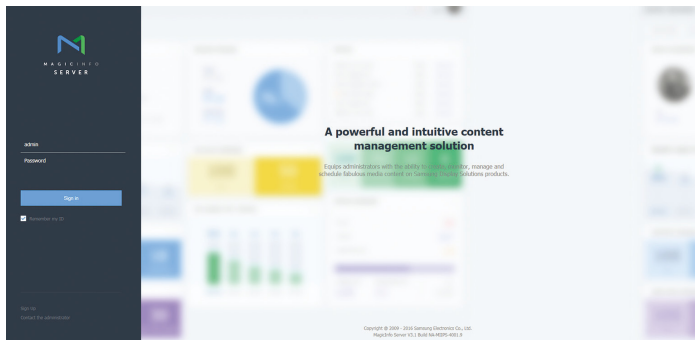


- **Install Web App:** Enter URL to install the web application.
- **Install from USB Device:** Install the web application from the USB storage device.
- **Uninstall:** Remove the installed web application.
- **Timeout Setting:** Set the timeout period for connecting to the URL.
- **Developer Mode:** Enable developer mode.

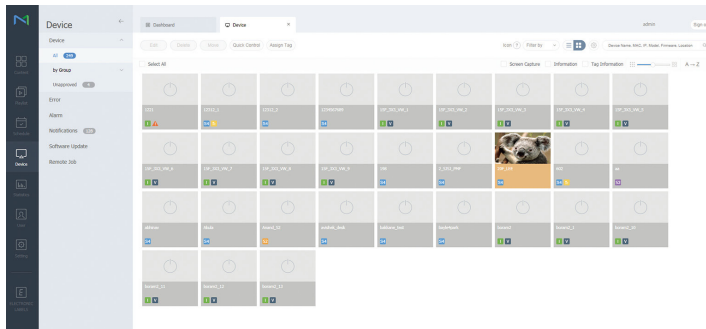
– The displayed image may differ depending on the model.

Approving a connected device from the server

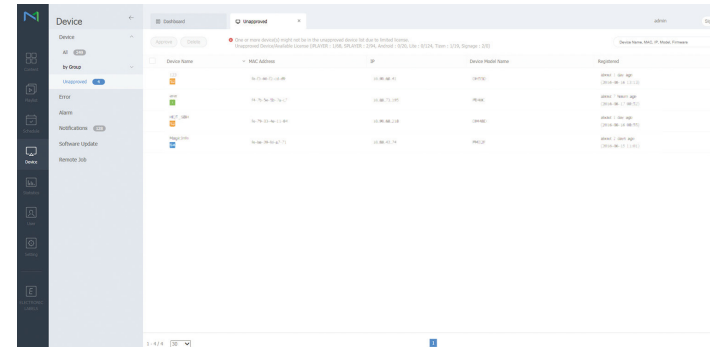
First configure the server **Server Network Settings** before device approval.



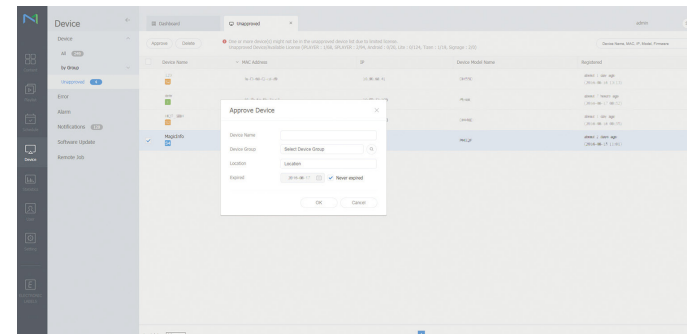
- 1 Access the server you have assigned to your device.
- 2 Enter your ID and password to log in.



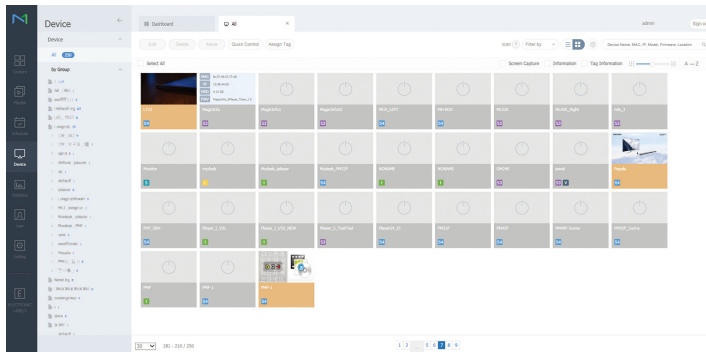
- 3 Select **Device** from the top menu bar.



- 4 Select **Unapproved** from the sub-menus.
- 5 Select the device from the list and click the **Approve** button.



- 6 Enter the information required to approve the device.
 - **Device Name:** Enter the device name.
 - **Device Group:** Select **Q** to specify the group.
 - **Location:** Enter the current location of the device.
 - **Expired:** Set expiry date for the device's approval. If you do not want to set the expiry date, select **Never expired**.
 - Pressing the **INFO** button on the remote when a network schedule is running will display the details of the schedule. Check that the correct device has been selected by viewing the device ID in the details.



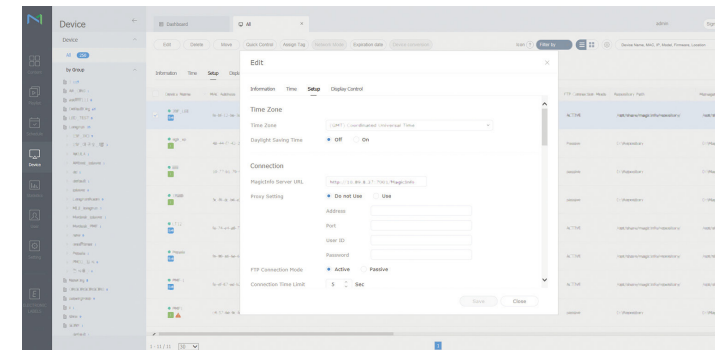
7 Select the **All** menu to check that the device has been registered.

8 When the device is approved by the server, the schedule registered in the selected group will be downloaded to the device. The schedule will run after it is downloaded.

- For further details on how to configure a schedule, refer to the <MagicInfo Lite Server user's manual>.
- If a device is deleted from the list of devices approved by the server, the device will reboot to reset its settings.

Setting the current time

A schedule may not run if the time set on the device is different from the server's current time.



1 Select **Device** from the side menu bar.

2 Select your device.

3 Select **Edit** → **Setup**.

4 Select **Time Zone**.

- When connecting to the server for the first time, the time on the product is set using the GMT time of the region where the server is installed.
- The time on the product can be changed from the server as shown in step 3.
- Turning the product off and then on again will restore the time setting on the product to the last time that was set from the server.
- For further details on how to manage the time (scheduling, holiday management, etc.), refer to the <MagicInfo Lite Server user's manual>.

Chapter 06


Picture

The layout of the **Picture** menu options may vary depending on the product.

Picture	
HDMI UHD Color	
HDMI Black Level	Auto
Picture Size	16:9 Standard
Reset Picture	

– The displayed image may differ depending on the model.

HDMI UHD Color

☰ MENU → **Picture** → **HDMI UHD Color** → 

Enable to optimise picture quality for HDMI UHD connection.

- **HDMI 1** (Off / On)
- **HDMI 2** (Off / On)
- **Display Port** (Off / On)

HDMI Black Level

☰ MENU → **Picture** → **HDMI Black Level** → 

Selects the black level on the screen to adjust the screen depth.

- **Normal** / **Low** / **Auto**

— Available only in **HDMI 1** and **HDMI 2** mode (AV Timing : 480p, 576p, 720p, 1080i, 1080p).

Picture Size

☰ MENU → Picture → Picture Size → 

choose size and aspect ratio picture displayed on screen.

Picture Size

— Different screen adjustment options are displayed depending on the current input source.

- **16:9 Standard**: Sets the picture to **16:9 Standard** wide mode.
- **Custom**: Changes the resolution to suit the user's preferences.
- **4:3**: Sets the picture to basic (**4:3**) mode.

— Do not set your product to **4:3** format for a long time.

The borders displayed on the left and right, or top and bottom of the screen may cause image retention (screen burn) which is not covered by the warranty.

Auto Wide

When set to On, your TV will automatically use the picture size recommended by the programme provider.

4:3 Screen Size

Available only when picture size is set to **Auto Wide**. You can determine the desired picture size at the 4:3 WSS (Wide Screen Service) size or the original size. Each European country requires different picture size.




Fit to Screen

Adjusts the picture position. When selected, the full programme image will be displayed. No part of the image will be cut off.

- **Off / On / Auto**

Zoom/Position

Adjusts the picture zoom and position. This option is available when the input source is set to **HDMI 1**, **HDMI 2** (1080i/1080p), **DisplayPort**. **Picture Size** must be set to **Custom** for the option to be available.

- 1 Press the ▼ button to select **Zoom/Position**. Press the  button.
- 2 Select the **Zoom** or **Position**. Press the  button.
- 3 Press the ▲/▼/◀/▶ button to move the picture.
- 4 Press the  button.

— If you want to reset the picture to its original position, select **Reset** in the **Zoom/Position** screen. The picture will be set to its default position.

Reset Picture

☰ MENU → Picture → Reset Picture → 

Resets your current picture mode to its default settings.

Chapter 07

OnScreen Display

OnScreen Display	
Display Orientation	
Message Display	
Language	English
Reset OnScreen Display	

– The displayed image may differ depending on the model.

Display Orientation

☰ MENU → OnScreen Display → Display Orientation → ↩

Onscreen Menu Orientation

Set the menu screen orientation.

- **Landscape**: Display the menu in landscape mode (default).
- **Portrait**: Display the menu in portrait mode on the right side of the product screen.

Source Content Orientation

Set the orientation of content from external devices connected to the product.

- **Landscape**: Display the screen in landscape mode (default).
- **Portrait**: Display the screen in portrait mode.

Aspect Ratio

Set the rotated screen to be either full screen or original.

- **Full Screen**: Display the rotated screen in full screen.
- **Original ratio**: Display the rotated screen in the original aspect ratio.

— Available only when **Source Content Orientation** is set to **Portrait**.

Message Display

☰ MENU → OnScreen Display → Message Display → 

Source Info

Select whether to display the source OSD when the input source changes.

- Off / On

No Signal Message

Select whether to display the no-signal OSD when no signal is detected.

- Off / On

MDC Message

Select whether to display the MDC OSD when the product is controlled by the MDC.

- Off / On

Download Status Message

Select to display the status when downloading content from a server or other device.

- Off / On


Language

☰ MENU → OnScreen Display → Language → 

Set the menu language.

- A change to the language setting will only be applied to the onscreen menu display. It will not be applied to other functions on your PC.

Reset OnScreen Display

☰ MENU → OnScreen Display → Reset OnScreen Display → 

This option returns the current settings under OnScreen Display to the default factory settings.

Chapter 08

Sound Adjustment

Configure the sound (**Sound**) settings for the product.

Sound	
Sound Mode	Standard
Balance	
Equaliser	
Auto Volume	Off
Reset Sound	

– The displayed image may differ depending on the model.

Sound Mode

☰ MENU → **Sound** → **Sound Mode** → 

You can select a sound mode to suit your personal preferences.

- **Standard**: Selects the normal sound mode.
- **Music**: Emphasises music over voices.
- **Movie**: Provides the best sound for movies.
- **Clear Voice**: Emphasises voices over other sounds.
- **Amplify**: Increase the intensity of high-frequency sound to allow a better listening experience for the hearing impaired.

Balance

☰ MENU → **Sound** → **Balance** → 

Adjust speaker volume levels for sound balance optimisation.

- **Balance L/R**: Adjusts the balance between the right and left speaker.

Equaliser


☰ MENU → Sound → Equaliser → 

Adjust the equaliser to customise the volume and pitch, and enhance the richness of the sound output.

- 100Hz / 300Hz / 1kHz / 3kHz / 10kHz (Bandwidth Adjustment): Adjusts the level of specific bandwidth frequencies.
- **Reset**: Resets the equaliser to its default settings.

— Available only when **Sound Mode** is set to **Standard**.

Auto Volume

☰ MENU → Sound → Auto Volume → 

The volume can vary depending on the channel.

Automatically equalise the volume level when switching to another channel.

- **Off** / **Normal** / **Night**


Normal equalises the volume level on each channel, so that when you change channels, the volume level is the same.

Night equalises and decrease the volume level on each channel, so each channel is quieter.

Night is useful at night, when you may want to keep the volume low.

— To use the volume control of a connected source device, set **Auto Volume** to **Off**. A change to the volume control of the connected source device may not be applied if **Auto Volume** is set to **Normal** or **Night**.

Reset Sound

☰ MENU → Sound → Reset Sound → 

Reset all sound settings to the factory defaults.

Chapter 09

Network

Network	
Network Status	
Open Network Settings	
Server Network Settings	
Device Name	[Signage]Display1

– The displayed image may differ depending on the model.

Network Status

☰ MENU → Network → Network Status → 

You can check the current network and Internet status.

Open Network Settings

☰ MENU → Network → Open Network Settings → 

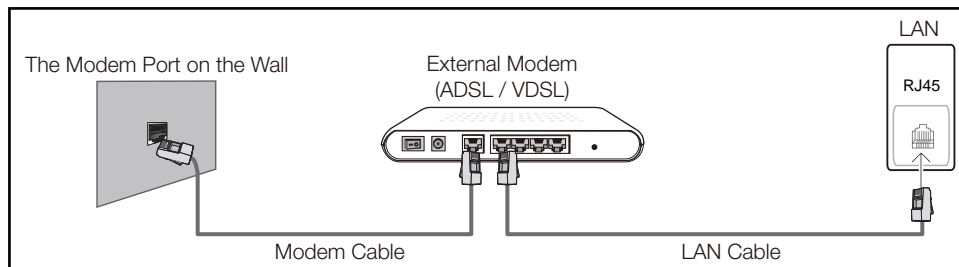
Configure network settings to use various smart hub features such as Internet search, content sharing through a home network and feature updates.

Network Settings

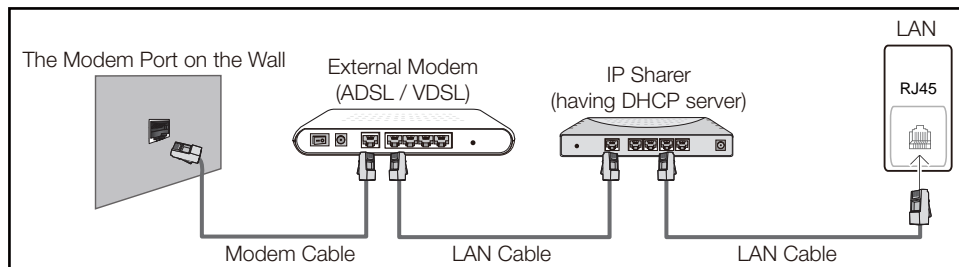
Connecting to a Wired Network

There are three ways to attach your product to your LAN using cable.

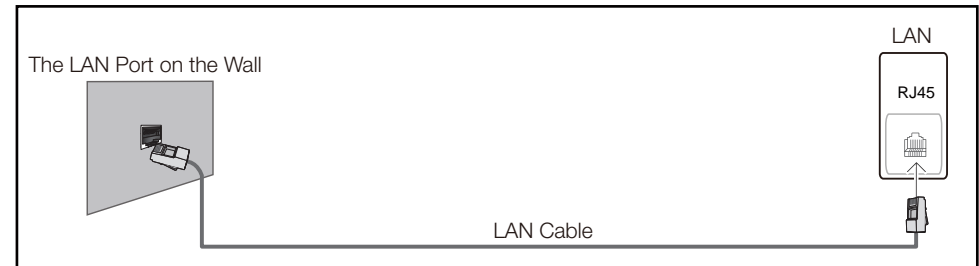
- You can attach your product to your LAN by connecting the LAN port on the back of your product to an external modem using a LAN cable. See the diagram below.



- You can attach your product to your LAN by connecting the LAN port on the back of your product to an IP Sharer which is connected to an external modem. Use LAN cable for the connection. See the diagram below.



- Depending on how your network is configured, you may be able to attach your product to your LAN by connecting the LAN port on the back of your product directly to a network wall outlet using a LAN cable. See the diagram below. Note that the wall outlet is attached to a modem or router elsewhere in your house.



If you have a Dynamic Network, you should use an ADSL modem or router that supports the Dynamic Host Configuration Protocol (DHCP). Modems and routers that support DHCP automatically provide the IP address, subnet mask, gateway, and DNS values your product needs to access the Internet so you do not have to enter them manually. Most home networks are Dynamic Networks.

Some networks require a Static IP address. If your network requires a Static IP address, you must enter the IP address, subnet mask, gateway, and DNS values manually on your product Cable Setup Screen when you set up the network connection. To get the IP address, subnet mask, gateway, and DNS values, contact your Internet Service Provider (ISP).

If you have a Windows computer, you can also get these values through your computer.

- You can use ADSL modems that support DHCP if your network requires a Static IP address.
- ADSL modems that support DHCP also let you use Static IP addresses.

Set the network connection to use Internet services such as perform software upgrades.

Automatic Open Network Settings

Connect to the network using a LAN cable.
Make sure a LAN cable is connected first.

How to set up automatically

- 1 Select **Open Network Settings**. The **Open Network Settings** session starts.
- 2 The network test screen appears and verifies the network connection.

When the connection has been verified, the “**Your device is connected to the Internet. If you have any problems using online services, please contact your Internet service provider.**” message appears.
 - If the connection process fails, check the LAN port connection.
 - If the automatic process cannot find the network connection values or if you want to set the connection manually, go to the next section, network setup.

Manual Open Network Settings

Offices may use static IP addresses.



If this is the case, ask the network administrator for the IP address, subnet mask, gateway and DNS server address. Enter these values manually.

Getting the Network Connection Values

To view the Network connection values on most Windows computers, follow these steps.

- 1 Right click the Network icon on the bottom right of the screen.
- 2 In the pop-up menu that appears, click Status.
- 3 On the dialog that appears, click the **Support** tab.
- 4 On the **Support** Tab, click the **Details** button. The Network connection values are displayed.

How to set up manually

- 1 Select **Open Network Settings**. The **Open Network Settings** session starts.
- 2 The network test screen appears and the verification process starts. Press **Stop**. The verification process stops.
- 3 Select **IP Settings** on network connection screen. The **IP Settings** screen appears.
- 4 Select the field at the top, press , and then set **IP Settings** to **Enter manually**. Repeat the entry process for each field in the **IP Address**.
 - Setting **IP Settings** to **Enter manually** automatically changes **DNS Setting** to **Enter manually**.
- 5 When done, select **OK** at the bottom of the page, and then press . The network test screen appears and the verification process starts.
- 6 When the connection has been verified, the “**Your device is connected to the Internet. If you have any problems using online services, please contact your Internet service provider.**” message appears.

Server Network Settings

☰ MENU → Network → Server Network Settings → 

Connect to server

To run **Player** connect to a network.

- **Server Address / SSL / Port**
- If the **SSL** option is enabled, the server is configured to use https and data transfer is encrypted.
- Enter the server IP address and port number. Use 7001 as the port number. (If unable to connect to the server using port number 7001, check with your server administrator to find the correct port number and then change the port number.)

MagicInfo Mode

Select the appropriate **MagicInfo Mode** depending on the environment where you are using the product.

- **Lite / Premium**

Server Access

Select a method to connect the server network.

- **Allow / Deny**

FTP Mode

Specify the FTP operating mode.

- **Active / Passive**

Proxy server

Set up your proxy server connection and related functions.

Off / On

- **Address / Port / ID / Password**
- **Address / Port / ID** and **Password** are enabled only when **Proxy server** is set to **On**.

Device Name

☰ MENU → Network → Device Name → 

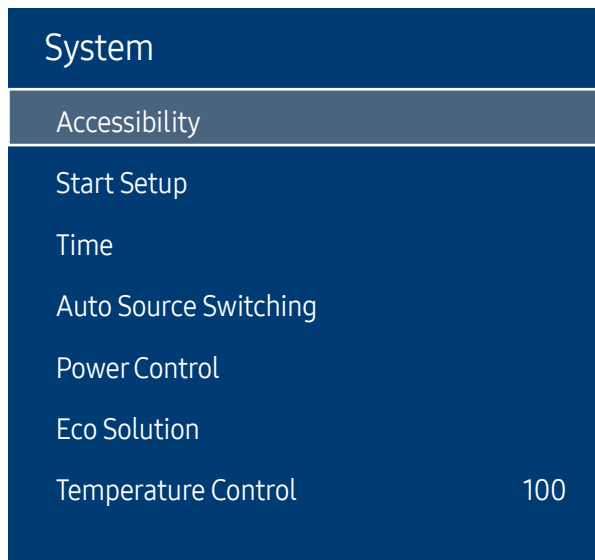
Select or enter a device name.

This name can be shown on network remote controls over the network.

- **[Signage]Display1 ~ 6 / User Input**

Chapter 10

System



– The displayed image may differ depending on the model.

Accessibility

☰ MENU → System → Accessibility → ↩

Menu Transparency

Adjust transparency of menu box.

- High / Low

High Contrast

Set the background and font to high-contrast colours in Menu. Menu transparencies become opaque when the option is selected.

- Off / On

Enlarge

Set whether to enlarge highlighted item in Menu.

- Off / On

Start Setup

☰ MENU → System → Start Setup →

Go through the initial setup steps like you did the first time you used this product.

- Enter your 4 digit PIN number. The default PIN number is "0-0-0-0".
If you want to change the PIN number, use the **Change PIN** function.

Time

☰ MENU → System → Time →

You can configure **Clock Set** or **Sleep Timer**. You can also set the product to automatically turn on or off at a specified time using the **Timer** function.

- Press the INFO button if you want to view the current time.

Clock Set

Select **Clock Set**. Select **Date** or **Time**, and then press .

Use the number buttons to enter numbers or press the up and down arrow buttons. Use the left and right arrow buttons to move from one entry field to the next. Press when done.

- You can set the **Date** and **Time** directly by pressing the number buttons on the remote control.

DST

Switches the DST (Daylight Saving Time) function on or off.

Off / On

- **Start Date**: Set the start date of Daylight Saving Time.
- **End Date**: Set the end date of Daylight Saving Time.
- **Time Offset**: Select the correct time offset your timezone.

- **Start Date**, **End Date** and **Time Offset** are enabled only when **DST** is set to **On**.

Sleep Timer

Automatically shuts off the product after a preset period of time.

(Off / 30 min / 60 min / 90 min / 120 min / 150 min / 180 min)

- Use the up and down arrows to select a period of time, and then press . To cancel **Sleep Timer**, select **Off**.

Power On Delay

When connecting multiple products, adjust the power-on time for each product to prevent power overload (within the range 0–50 seconds).

Auto Source Switching

☰ MENU → System → Auto Source Switching → 

Turning on the display with **Auto Source Switching On**, and the previous video source selection is not active, the display will automatically search the different video input sources for active video.

Auto Source Switching

When the **Auto Source Switching** is **On**, the display video source will automatically be searched for active video.

The **Primary Source** selection will be activated, if the current video source is not recognised.

Secondary Source selection will become active, if no primary video source is available.

If both the primary and secondary input sources are not recognised, the display will perform two searches for an active source, each search checking the primary and then secondary source. If both searches fail, the display will return to the first video source and display a message indicating that there is no signal.

When the **Primary Source** selection is set to **All**, the display will search all the video source inputs twice in sequence looking for an active video source, returning back to the first video source in the sequence if no video is found.

Primary Source Recovery

Select whether to restore the selected primary input source when a primary input source is connected.

— The **Primary Source Recovery** function is disabled if **Primary Source** is set to **All**.

Primary Source


Specify **Primary Source** for the automatic input source.

Secondary Source

Specify **Secondary Source** for the automatic input source.

— The **Secondary Source** function is disabled if **Primary Source** is set to **All**.

Power Control

☰ MENU → System → Power Control → 

Auto Power On

This feature automatically turns on the product as soon as it is plugged in. Pressing the power button is not needed.

- **Off / On**

Max. Power Saving

Turns off the product to reduce power consumption after the PC has been left idle for a specified period of time.

- **Off / On**

Standby Control

You can set the screen standby mode to be applied when an input signal is received.

- **Auto**
Power-saving mode will activate if no input signals are detected even though a source device is connected to the display.
The message **No Signal** will appear if no source device is connected.
- **Off**
The message **No Signal** will appear if no input signals are detected.
 - If **No Signal** is displayed although a source device is connected, check the cable connection.
 - If **No Signal Message** is set to **Off**, the **No Signal** message does not appear. If this is the case, set **No Signal Message** to **On**.
- **On**
Power-saving mode will activate if no input signals are detected.

Network Standby

This feature keeps the network power on when the product turns off.


- **Off / On**

Power Button

The power button can be set to either turn on the power or turn on/off the power.

- **Power on only**: Set the power button to turn on the power.
- **Power on and off**: Set the power button to turn on/off the power.

Eco Solution

☰ MENU → **System** → **Eco Solution** → 

No Signal Power Off

Save power by turning the device off when no signal is received from any source.

- **Off / 15 min / 30 min / 60 min**
 - Disabled when an attached PC is in power saving mode.
 - The product will automatically power off at a specified time. The time can be changed as required.

Auto Power Off

The product will automatically turn off if you don't press a button on the remote or touch a button on product front panel within select hours to prevent overheating.

- **Off / 4 hours / 6 hours / 8 hours**

Temperature Control

☰ MENU → **System** → **Temperature Control** → 

This function detects the internal temperature of the product. You can specify the temperature range that is acceptable.

The default temperature is set to 100 °C.

The recommended operating temperature for this product is 95 to 100 °C (based on an ambient temperature of 40 °C).

- The screen will become darker if the current temperature exceeds the specified temperature limit. If the temperature continues to rise, the product will power off to prevent overheating.

Input Device Manager

☰ MENU → System → Input Device Manager → 

Configure options for external input devices connected to the product.

Keyboard Language

Configure the key combination used to change the input language.

Keyboard type

Specify the keyboard type.

Input Language Shortcut

Select shortcut keys for switching between input languages.

Play via

☰ MENU → System → Play via → 

Select the appropriate **Play via** mode depending on the environment where you are using the product.

The home screen may be different depending on the setting.

- **MagicInfo / URL Launcher**

Change PIN

☰ MENU → System → Change PIN → 

The **Change PIN** screen will appear.

Choose any 4 digits for your PIN and enter it in **Enter New PIN**. Reenter the same 4 digits in **Confirm New PIN**.

The product has memorised your new PIN.

— Default password: 0 - 0 - 0 - 0

Security

☰ MENU → System → Security → 

— Enter your 4 digit PIN number. The default PIN number is "0-0-0-0".

If you want to change the PIN number, use the **Change PIN** function.

Safety Lock On

All the menus and buttons of the product and remote control, except for the **LOCK** button on the remote control, will be locked by the **Safety Lock On** function.

To unlock the menus and buttons, press any button and then enter the password (default password: 0-0-0-0).

Turn on **Power On Button** to enable the remote control's Power button to turn on the device while **Safety Lock On** is enabled.

Power On Button

Turn on this feature to enable the remote control's Power button to turn on the device while **Safety Lock On** is enabled.

- **Off / On**

Button Lock

This menu can be used to lock the buttons on the product.

Only the remote control can control the product if **Button Lock** is set to **On**.

- **Off / On**

USB Auto Play Lock

Select whether to automatically play **MagicInfo** content saved on a connected USB device.

- **Off**
Play **MagicInfo** content saved on the USB device automatically.
 - **On**
Do not play **MagicInfo** content saved on the USB device automatically.
- Connecting a USB device containing **MagicInfo** content displays "**USB Auto Play Lock : On**" for five seconds.

Touch Control Lock

Lock the touchscreen control mode to prevent devices from being controlled by touch input.

- **Off / On**

General

☰ MENU → **System** → **General** → 

Smart Security

Security provided to protect your TV and connected storage devices against viruses includes.

Scan

Inspect the TV and connected storage devices to check for viruses.

Isolated List

This is the list of items that have been Isolated for containing viruses.

Real-Time Monitoring

Scans for viruses by monitoring the display device in real time.

Monitoring Results

Check the list of files, networks, and processes that have been blocked.

Anynet+ (HDMI-CEC)

Anynet+ (HDMI-CEC)

Anynet+ is a function that enables you to control all connected Samsung devices that support Anynet+ with your Samsung product remote. The Anynet+ system can be used only with Samsung devices that have the Anynet+ feature. To be sure your Samsung device has this feature, check if there is an Anynet+ logo on it.

- **Off / On**

- You can only control **Anynet+** devices using the product remote control, not the buttons on the product.
- The product remote control may not work under certain conditions. If this occurs, reselect the **Anynet+** device.
- **Anynet+** works when the AV device supporting **Anynet+** is in the standby or on status.
- **Anynet+** supports up to 12 AV devices in total. Note that you can connect up to 3 devices of the same type.

Troubleshooting for Anynet+

Problem	Possible Solution
Anynet+ does not work.	<ul style="list-style-type: none">• Check if the device is an Anynet+ device. The Anynet+ system supports Anynet+ devices only.• Check if the Anynet+ device power cord is properly connected.• Check the Anynet+ device's Video/Audio/HDMI cable connections.• Check whether Anynet+ (HDMI-CEC) is set to On in the System menu.• Check whether the remote control is Anynet+ compatible.• Anynet+ doesn't work in certain situations. (initial setup)• If you have removed and then reconnected the HDMI cable, please make sure to search devices again or turn your product off and on again.• Check if the Anynet+ function of the Anynet device is set on.
I want to start Anynet+.	<ul style="list-style-type: none">• Check if the Anynet+ device is properly connected to the product and check if the Anynet+ (HDMI-CEC) is set to On in the System menu.
I want to exit Anynet+.	<ul style="list-style-type: none">• Press the SOURCE button on the product remote control and select a non- Anynet+ device.
The message "Disconnecting Anynet+ device ..." appears on the screen.	<ul style="list-style-type: none">• You cannot use the remote control when you are configuring Anynet+ or switching to a view mode.• Use the remote control after the product has completed Anynet+ configuration or has finished switching to Anynet+.
The Anynet+ device does not play.	<ul style="list-style-type: none">• You cannot use the play function when initial setup is in progress.

Problem

Possible Solution

The connected device is not displayed.

- Check whether or not the device supports Anynet+ functions.
- Check whether or not the HDMI cable is properly connected.
- Check whether **Anynet+ (HDMI-CEC)** is set to **On** in the **System** menu.
- Search Anynet+ devices again.
- Anynet+ requires an HDMI connection. Make sure the device is connected to your product with an HDMI cable.
- Some HDMI cables may not support Anynet+ functions.
- If the connection is terminated because there has been a power failure or the HDMI cable has been disconnected, please repeat the device scan.

HDMI Hot Plug

This feature is used to activate the time delay to turn on a DVI/HDMI source device.

- **Off / On**

Game Mode


When connecting to a game console such as PlayStation™ or Xbox™, you can enjoy a more realistic gaming experience by selecting game mode.

- **Off / On**

— Precautions and limitations for **Game Mode**

To disconnect the game console and connect another external device, set **Game Mode** to **Off** in the setup menu.

Reset System


☰ MENU → **System** → **Reset System** → 

This option returns the current settings under system to the default factory settings.

Chapter 11

Support

Software Update

☰ MENU → **Support** → **Software Update** → 

The **Software Update** menu lets you upgrade your product software to the latest version.

- Be careful not to turn off the power until the upgrade is complete. The product will turn off and on automatically after completing the software upgrade.
- When you upgrade software, all video and audio settings you have made will return to their default settings. We advise you to write down your settings so that you can easily reset them after the upgrade.

Update now


Update the software to the latest version.

Auto update

This feature automatically updates the product when not in use.

- **Off / On**

Contact Samsung

☰ MENU → **Support** → **Contact Samsung** → 

View this information when your product does not work properly or when you want to upgrade the software.

You can find information regarding our call centres and how to download products and software.

- **Contact Samsung** and find the product **Model Code** and **Software Version**.

Reset All

☰ MENU → **Support** → **Reset All** → 

This option returns all the current settings for a display to the default factory settings.

Chapter 12

Playing photos and videos (Media Play)

Enjoy videos, photos files saved on a USB Mass Storage Class (MSC) device.

Play photos or videos saved on a storage device.

Play a variety of content using the following methods.

- Using a USB device: Play media content such as videos and photos from a USB device.
- Connecting a storage device: Play media content saved on a storage device such as a smartphone, camera, PC or cloud service.

Read the following before using media play with a USB device

Caution

- Before connecting a USB device to the product, back up files to ensure your data is not damaged or lost. Samsung Electronics is not liable for any damage or loss of data.
- Do not remove a USB device while it is loading.
- If a USB device is connected using a USB extension cable, the USB device may not be recognised or files saved on the device may not be able to be read.
- If the product does not recognise a connected USB device, the files on the USB device may be corrupted or may not be able to be played. If this occurs, connect the USB device to the PC to format the device, then make sure the device is connected properly.
- USB HDD greater than 2TB is not supported.

Compatible devices with media play

- Some USB digital cameras, smartphones and audio devices may not be compatible with the product.
- Media play is only compatible with USB MSC devices.
- MSC device refers to a Mass Storage Class Bulk-Only Transport device.
Examples of MSC devices include Thumb drives, Flash card readers and USB HDDs. (USB hubs are not supported.)
These MSC devices must be connected directly to a USB port on the product.
- If more than one Picture Transfer Protocol (PTP) device is connected, only one will work at a time.
- If multiple MSC devices are connected, some devices may not be recognised.
- USB devices that require high power (higher than 500mA or 5V) may not be supported.
- If an overheating warning message appears when a USB device is connected or used, the USB device may not be recognised or function properly.
- The screensaver activates if the product is left idle for a period of time specified in **Auto Protection Time**.
- Power-saving mode on some external hard disk drives may automatically deactivate after connecting to the product.

File system and formats

- Media play may not function properly with unlicensed multimedia files.
- Media Transfer Protocol (MTP) is not supported.
- Supported file systems include FAT16, FAT32 and NTFS (read only).
- Media play supports the sequential JPEG format.
It does not support the progressive JPEG format.
- Images with a higher resolution take longer to be displayed on the screen.
- The maximum JPEG resolution supported is 15360x8640 pixels.
- If a file is incompatible or corrupted, a message **Not Supported File Format** appears.
- When sorting files in folder view mode, a maximum of 1000 files can be displayed in each folder.
- If a USB device contains 8000 files and folders or more, some files and folders may not open.
- DRM MP3 files downloaded from websites that charge a fee cannot be played.
Digital Rights Management (DRM) refers to a system for protecting the copyrights of data circulated via the Internet or other digital media by enabling secure distribution and/or disabling illegal distribution of the data.



Using a USB device

Connecting a USB device

- 1 Turn on your product.
- 2 Connect a USB device containing photo and/or movie files to the USB port on the back or side panel of the product.
- 3 The **Player** page automatically appears as soon as a USB device connects to the product.
 - If only one USB device is connected, files saved on the USB device are displayed automatically.
 - To view content saved on a USB device, connect the USB device to a USB port on the product.

Removing a USB device

Removing a USB device from Source

- 1 Press  on the remote control.
 -  → **Player** → **Options** → **Safely Remove**
- 2 Select **Safely Remove** and wait until the USB device is disconnected. The USB device is disconnected.

– It is recommended to use a USB HDD that has a power adapter.

– It is recommended to remove a USB device using the **Safely Remove** function.

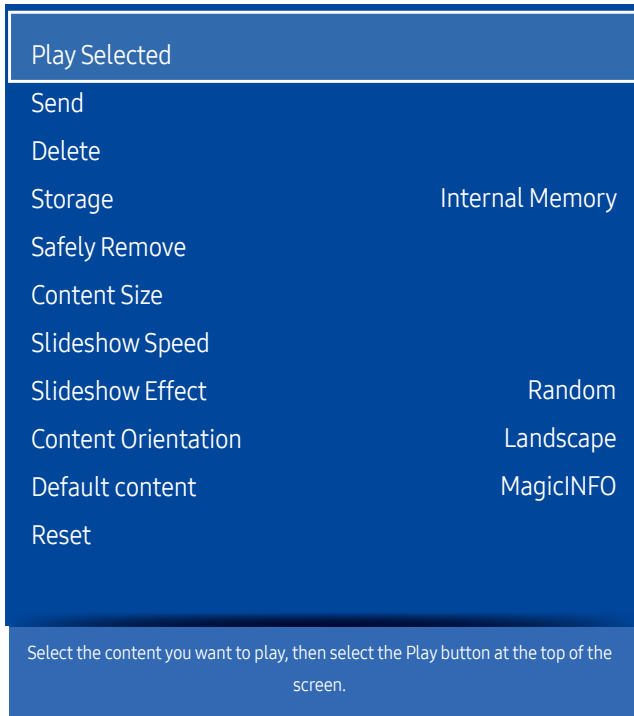
Features provided in the media content list page

🏠 → **Player** → Storage device → **USB**

The media content list page on a storage device provides the following features.

- Storage device
Internal Memory / USB
- **Filter By**
Among **Video**, **Image**, **PDF**, **Office** and **My Templates** content saved on a storage device, view content files under a desired file format only.
- **Options**

Menu items in the media content list page



– The displayed image may differ depending on the model.

Option Name	Operations
Play Selected	Select the content you want to play, then select the play button at the top of the screen.
Send	Select the content you want to send to the other device, then select the Send button at the top of the screen.
Delete	Select the content you want to delete, then select the Delete button at the top of the screen.
Storage	Select the save location for schedules downloaded from the magicInfo server and other devices.
Safely Remove	Safely removes USB memory
Content Size	Set the screen size for content.
Slideshow Speed	Set the time each slide will play for.
Slideshow Effect	Set which transition effect to apply between image slides.
Content Orientation	Switch the orientation of playing content to Landscape or Portrait mode.
Default content	This default content will be displayed if you run a channel while no programmes are scheduled on the channel.
Reset	Restore all the values under Options to the default when the product was purchased.

-
- Pressing the **INFO** button while a device name is selected will display information about the selected device.
 - Pressing the **INFO** button while a file is selected will display information about the selected file.





Available buttons and features during photo playback

Pressing the  button or , , ,  button displays the following buttons. The **RETURN** button makes the buttons disappear.

- **Pause / Play**
Start or stop a slideshow. Using a slideshow, it is possible to play all photos in a folder.
- **Previous / Next**
View the previous or next photo.

Available buttons and features during video playback

Pressing the  button or , , ,  button displays the following buttons. The **RETURN** button makes the buttons disappear.

- **Pause / Play**
Pause or play a video.
The following features are available in pause mode. Note that sound cannot be heard in pause mode.
- **Rewind / Fast forward**
Rewind or fast forward a video. Speed up playback up to 3x, if required. To change the playback speed to the original speed, select .
- **Previous / Next**
To play the previous video, select  twice. Selecting  once will play the current video from the beginning.
To play the next video, select .

Supported Subtitle and Media play file formats

Subtitle

External

- MPEG-4 timed text (.ttxt)
- SAMI (.smi)
- SubRip (.srt)
- SubViewer (.sub)
- Micro DVD (.sub or .txt)
- SubStation Alpha (.ssa)
- Advanced SubStation Alpha (.ass)
- Powerdivx (.psb)

Internal

- Xsub
Container: AVI
- SubStation Alpha
Container: MKV
- Advanced SubStation Alpha
Container: MKV
- SubRip
Container: MKV
- MPEG-4 timed text
Container: MP4

Supported image resolutions

File Extension	Type	Resolution
*.jpg, *.jpeg	JPEG	15360 x 8640
*.png	PNG	1920 x 1080
*.bmp	BMP	1920 x 1080
*.mpo	MPO	15360 x 8640

Supported music file formats

File Extension	Type	Codec	Comments
*.mp3	MPEG	MPEG1 Audio Layer 3	
*.m4a, *.mpa, *.aac, *.3ga	MPEG4	AAC	
*.flac	FLAC	FLAC	The Seek (jump) function is not supported. Supports up to 2 channel

Supported Video Formats

- Video content will not play, or not play correctly, if there is an error in the content or the container.
- Sound or video may not work if the contents have a standard bitrate/frame rate above the compatible Frame/sec listed in the table above.
- If the Index Table is in error, the Seek (Jump) function is not supported.
- You may experience file stuttering while playing a video through a network connection.
- The menu may take longer to appear if the video's bit rate exceeds 10Mbps.
- Some USB/digital camera devices may not be compatible with the player.

Video Decoder

Supports up to H.264, Level 4.1
H.264 FMO / ASO / RS, VC1 SP / MP / AP L4 and AVCHD are not supported.
For all Video codecs except MVC, VP8, VP6:

- Below 1280 x 720: 60 frame max
- Above 1280 x 720: 30 frame max

GMC 2 over is not supported.
Supports only BD MVC Spec.

Audio Decoder

Supports up to WMA10 Pro 5.1 channel.
WMA lossless audio is not supported.
QCELP, AMR NB/WB are not supported.
If Vorbis is only in Webm container, supports up to 2 channel.

File Extension	Container	Video Codec	Resolution	Frame rate (fps)	Bit rate (Mbps)	Audio Codec
*.avi	AVI	DivX 3.11 / 4.x / 5.x / 6.x	1920 x 1080	6~30	30	AC3
*.mkv	MKV					LPCM
*.asf	ASF					ADMPCM
*.wmv	MP4	MPEG4 SP / ASP				(IMA, MS)
*.mp4	3GP					AAC
*.mov	VRO	H.264 BP / MP / HP				HE-AAC
*.3gp	VOB					WMA
*.vro	PS					DD+
*.mpg	TS	Motion JPEG				MPEG(MP3)
*.mpeg						DTS Core
*.ts		Window Media Video v9	640 x 480		4	G.711(ALaw,μ-Law)
*.tp						
*.trp		MPEG2				
*.mov						
*.flv		MPEG1	1920 x 1080	24 / 25 / 30	40	
*.vob						
*.svi		VP6				
*.m2ts						
*.mts		MVC		6 ~ 30	8	Vorbis
*.divx						
*.webm	WebM	VP8				

Chapter 13

Troubleshooting Guide

Requirements Before Contacting Samsung Customer Service Centre

-
- Before calling Samsung Customer Service Centre, test your product as follows. If the problem persists, contact Samsung Customer Service Centre.

-
- If the screen remains blank, check the PC system, video controller and cable.

Testing the Product

Check if your product is operating normally by using the product test function.

If the screen remains blank while the power LED blinks even when the product is correctly connected to a PC, perform product testing.

- 1 Power off both the PC and product.
- 2 Disconnect all the cables from the product.
- 3 Power on the product.
- 4 If **No Signal** is displayed, the product is operating normally.

Checking the Resolution and Frequency

Not Optimum Mode will briefly be displayed if a mode that exceeds a supported resolution is selected (refer to Supported Resolutions).

Check the followings.

Installation issue (PC mode)

The screen keeps switching on and off.	Check the cable connection between the product and PC, and ensure the connection is secure.
Blank spaces are found on all four sides of the screen when an HDMI or HDMI-DVI cable is connected to the product and PC.	The blank spaces found on the screen have nothing to do with the product.
	Blank spaces on the screen are caused by the PC or graphics card. To resolve the problem, adjust the screen size in the HDMI or DVI settings for the graphics card.
	If the graphics card settings menu does not have an option to adjust the screen size, update the graphics card driver to the latest version. (Please contact the graphics card or computer manufacturer for further details about how to adjust the screen settings.)

Screen issue

The power LED is off. The screen will not switch on.	Make sure that the power cord is connected.
No Signal is displayed on the screen.	Check that the product is connected correctly with a cable.
	Check that the device connected to the product is powered on.
Not Optimum Mode is displayed.	This message is displayed when a signal from the graphics card exceeds the product's maximum resolution and frequency.
	Refer to the Standard Signal Mode Table and set the maximum resolution and frequency according to the product specifications.
The images on the screen look distorted.	Check the cable connection to the product.

Screen issue

The screen is not clear. The screen is blurry.	Remove any accessories (video extension cable, etc) and try again.
	Set the resolution and frequency to the recommended level.
The screen appears unstable and shaky.	Check that the resolution and frequency of the PC and graphics card are set within a range compatible with the product. Then, change the screen settings if required by referring to the Additional Information on the product menu and the Standard Signal Mode Table. Use an HDMI cable to obtain high-definition (HD) picture quality.
There are shadows or ghost images left on the screen.	
Picture quality of the product is different from the dealer shop where it was purchased.	
There is no image on the screen and the power LED blinks every 0.5 to 1 second.	The product is in power-saving mode.
	Press any key on the keyboard or move the mouse to return to the previous screen.
The product will turn off automatically.	Go to System and make sure Sleep Timer is set to Off .
	If a PC is connected to the product, check the power status of the PC.
	Make sure the power cable is connected properly to the product and power outlet.
	If the signal from a connected device is not detected, the product automatically turns off after 10 to 15 minutes.
The screen display does not look normal.	Encoded video content may cause the display to appear corrupted in scenes featuring fast moving objects such as in a sports event or action video.
	Low signal level or low picture quality may cause the display to appear corrupted. This does not mean the product is defective.
	A cell phone within a distance of one-meter radius may cause static on analogue and digital products.
The brightness and colour do not look normal.	Go to System and adjust the Eco Solution settings.
	Reset the screen settings to the default settings.

Screen issue

Lines (red, green or blue) are displayed on the screen.	These lines are displayed when there is a defect in DATA SOURCE DRIVER IC on the monitor. Contact a Samsung Service Centre to resolve the issue.
The display looks unstable and then freezes.	The screen may freeze when a resolution other than the recommended resolution is used or if the signal is not stable. To resolve the issue, change the PC resolution to the recommended resolution.
The screen cannot be displayed in full screen.	A scaled SD (4:3) content file can cause black bars on both sides of an HD channel screen.
	A video with an aspect ratio different from the product can cause black bars at the top and bottom of the screen.
	Change the screen size setting to full screen on the product or source device.

Sound issue

There is no sound.	Check the connection of the audio cable or adjust the volume.
	Check the volume.
The volume is too low.	Adjust the volume.
	If the volume is still low after turning it up to the maximum level, adjust the volume on your PC sound card or software programme.

Sound issue

Video is available but there is no sound.

If an HDMI cable is connected, check the audio output settings on the PC.

If a source device is used

- Make sure the audio cable is properly connected to the audio input port on the product.
- Check the audio output settings for the source device.
(For example, if an HDMI cable is connected to the monitor, the audio setting for the cable box may need to be changed to HDMI.)

If a DVI-HDMI cable is used, a separate audio cable is required.

If the product has a headphone port, make sure nothing is connected to it.

Reconnect the power cable to the device and then reboot the device.

There is static coming from the speakers.

Check the cable connection. Make sure a video cable is not connected to an audio input port.

Check the signal strength after connecting a cable.

Low signal level can cause corrupted sound.

There is audible sound when the volume is muted.

Audio settings for main speakers are separate from the internal speakers on the product.
Changing or muting the volume on the product does not affect an external amplifier(decoder).

Remote control issue

The remote control does not work.

Make sure that the batteries are correctly in place (+/-).

Check if the batteries are flat.

Check for power failure.

Make sure that the power cord is connected.

Check for any special lighting or neon signs switched on in the vicinity.

Source device issue

A beeping sound is heard when my PC is booting.

If a beeping sound is heard when your PC is booting, have your PC serviced.

Other issue

The product smells like plastic.

The plastic smell is normal and disappears over time.

Audio or video cuts out intermittently.

Check the cable connection and connect it again if required.

Using a very hard or thick cable may corrupt audio and video files.

Make sure cables are flexible enough to ensure durability. When mounting the product onto a wall, it is recommended to use right-angle cables.

When I try to change the PC resolution, a message "**The defined resolution is not supported.**" appears.

The message "**The defined resolution is not supported.**" appears if the input source resolution exceeds the maximum resolution of the display.

To resolve the issue, change the PC resolution to a resolution supported on the display.

There is no sound from the speakers in HDMI mode when a DVI-HDMI cable is connected.

DVI cables do not transmit sound data.

Make sure to connect the audio cable to the correct input jack to enable audio.

HDMI Black Level is not functioning properly on an HDMI device with YCbCr output.

This function is available only when a source device, such as a DVD player and STB, is connected to the product via an HDMI (RGB signal) cable.

There is no sound in HDMI mode.

Displayed picture colours may not look normal. Video or sound may not be available. This can occur if a source device that only supports an older version of the HDMI standard is connected to the product.

Some PC graphics cards may not automatically recognise HDMI signals that do not include sound. In this case, manually select a sound input.

Other issue

The IR sensor is not functioning.	<p data-bbox="1142 276 2004 300">Make sure the sensor light turns on when a button is pressed on the remote control.</p> <hr/> <ul data-bbox="1142 339 2094 754" style="list-style-type: none"><li data-bbox="1142 339 2094 539">• If the sensor light does not turn on, turn the power switch off and then on again on the back of the product. (The power LED lights up red when the screen is switched off.) If the sensor light still does not turn on after the power switch is turned off and then on again, an internal jack may be disconnected. Contact your nearest service centre to have the product serviced.<li data-bbox="1142 571 2094 667">• If the sensor light that is on does not flash red when a button is pressed on the remote control, the IR sensor may be defective. Contact your nearest service centre to have the product serviced.<li data-bbox="1142 699 2094 754">• This function is available only when a source device, such as a DVD player and STB, is connected to the product via an HDMI (RGB signal) cable.
In power-saving mode, when the input source is DisplayPort , PC display settings cannot be saved.	<p data-bbox="1142 790 2094 853">Go to System → Power Control and set Max. Power Saving to Off. Alternatively, configure the PC display output settings again. Ensure the set is turned on.</p>
When booting the PC with the input source set to DisplayPort the BIOS and booting screens do not appear.	<p data-bbox="1142 893 1982 917">Boot the PC when the set is turned on or when the input source is not DisplayPort.</p>

Q & A

Question

Answer

How can I change the frequency?

Set the frequency on your graphics card.

- Windows XP: Go to **Control Panel** → **Appearance and Themes** → **Display** → **Settings** → **Advanced** → **Monitor** and adjust the frequency in **Monitor Settings**.
- Windows ME/2000: Go to **Control Panel** → **Display** → **Settings** → **Advanced** → **Monitor** and adjust the frequency in **Monitor Settings**.
- Windows Vista: Go to **Control Panel** → **Appearance and Personalization** → **Personalize** → **Display Settings** → **Advanced Settings** → **Monitor** and adjust the frequency in **Monitor Settings**.
- Windows 7: Go to **Control Panel** → **Appearance and Personalization** → **Display** → **Adjust resolution** → **Advanced Settings** → **Monitor** and adjust the frequency in **Monitor Settings**.
- Windows 8: Go to **Settings** → **Control Panel** → **Appearance and Personalization** → **Display** → **Adjust resolution** → **Advanced Settings** → **Monitor** and adjust the frequency in **Monitor Settings**.
- Windows 10: Go to **Settings** → **System** → **Display** → **Advanced display settings** → **Display adapter properties** → **Monitor**, and adjust **Screen refresh rate** under **Monitor settings**.

How can I change the resolution?

- Windows XP: Go to **Control Panel** → **Appearance and Themes** → **Display** → **Settings** and adjust the resolution.
- Windows ME/2000: Go to **Control Panel** → **Display** → **Settings** and adjust the resolution.
- Windows Vista: Go to **Control Panel** → **Appearance and Personalization** → **Personalize** → **Display Settings** and adjust the resolution.
- Windows 7: Go to **Control Panel** → **Appearance and Personalization** → **Display** → **Adjust Resolution** and adjust the resolution.
- Windows 8: Go to **Settings** → **Control Panel** → **Appearance and Personalization** → **Display** → **Adjust Resolution** and adjust the resolution.
- Windows 10: Go to **Settings** → **System** → **Display** → **Advanced display settings**, and adjust the resolution.

– Refer to the user manual for your PC or graphics card for further instructions on adjustment.

Question

Answer

How do I set powersaving mode?

- Windows XP: Set power-saving mode in **Control Panel → Appearance and Themes → Display → Screen Saver Settings** or BIOS SETUP on the PC.
 - Windows ME/2000: Set power-saving mode in **Control Panel → Display → Screen Saver Settings** or BIOS SETUP on the PC.
 - Windows Vista: Set power-saving mode in **Control Panel → Appearance and Personalization → Personalize → Screen Saver Settings** or BIOS SETUP on the PC.
 - Windows 7: Set power-saving mode in **Control Panel → Appearance and Personalization → Personalize → Screen Saver Settings** or BIOS SETUP on the PC.
 - Windows 8: Set power-saving mode in **Settings → Control Panel → Appearance and Personalization → Personalize → Screen Saver Settings** or BIOS SETUP on the PC.
 - Windows 10: Set power-saving mode in **Settings → Personalization → Lock screen → Screen timeout settings → Power & sleep** or BIOS SETUP on the PC.
-

Chapter 14

Specifications

General

Model Name		SBB-SSF
Power Supply		AC100-240V~ 50/60Hz Based on the AC voltage of the adapter. For the DC voltage of the product, refer to the product label.
Environmental considerations	Operating	Temperature : 0 °C - 40 °C (32 °F - 104 °F) * For installing the housing, keep the internal temperature at 40 °C or below. Humidity : 10% - 80%, non-condensing
	Storage	Temperature : -20 °C - 45 °C (-4 °F - 113 °F) Humidity : 5% - 95%, non-condensing
Supported models		DCE, QMF

Plug-and-Play

This monitor can be installed and used with any Plug-and-Play compatible systems. Two-way data exchange between the monitor and PC system optimises the monitor settings. Monitor installation takes place automatically. However, you can customise the installation settings if desired.

— This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

— For detailed device specifications, visit the Samsung Electronics website.

Preset Timing Modes

- This product can be set to only one resolution for each screen size to obtain the optimum picture quality due to the nature of the panel. Using a resolution other than the specified resolution may degrade the picture quality. To avoid this, it is recommended that you select the optimum resolution specified for your product.
- Check the frequency when you exchange a CDT product (connected to a PC) for an LCD product. If the LCD product does not support 85 Hz, change the vertical frequency to 60 Hz using the CDT product before you exchange it with the LCD product.

– Horizontal Frequency

The time required to scan a single line from the left to the right side of the screen is called a horizontal cycle. The reciprocal number of a horizontal cycle is called horizontal frequency. Horizontal frequency is measured in kHz.

– Vertical Frequency

The product displays a single image multiple times per second (like a fluorescent light) to display what the viewer sees. The rate of a single image being displayed repeatedly per second is called vertical frequency or refresh rate. Vertical frequency is measured in Hz.

Synchronization	Horizontal Frequency	30 - 135 kHz
	Vertical Frequency	30 - 75 Hz
Resolution	Optimum resolution	3840 x 2160 @ 60 Hz
	Maximum resolution	3840 x 2160 @ 60 Hz

The screen will automatically be adjusted if a signal that belongs to the following standard signal modes is transmitted from your PC. If the signal transmitted from the PC does not belong to the standard signal modes, the screen may be blank with the power LED on. In such a case, change the settings according to the following table by referring to the graphics card user manual.

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)
IBM, 720 x 400	31.469	70.087	28.322	-/+
MAC, 640 x 480	35.000	66.667	30.240	-/-
MAC, 832 x 624	49.726	74.551	57.284	-/-
MAC, 1152 x 870	68.681	75.062	100.000	-/-
VESA, 640 x 480	31.469	59.940	25.175	-/-
VESA, 640 x 480	37.861	72.809	31.500	-/-
VESA, 640 x 480	37.500	75.000	31.500	-/-
VESA, 800 x 600	35.156	56.250	36.000	+/+

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)
VESA, 800 x 600	37.879	60.317	40.000	+/+
VESA, 800 x 600	48.077	72.188	50.000	+/+
VESA, 800 x 600	46.875	75.000	49.500	+/+
VESA, 1024 x 768	48.363	60.004	65.000	-/-
VESA, 1024 x 768	56.476	70.069	75.000	-/-
VESA, 1024 x 768	60.023	75.029	78.750	+/+
VESA, 1152 x 864	67.500	75.000	108.000	+/+
VESA, 1280 x 720	45.000	60.000	74.250	+/+
VESA, 1280 x 800	49.702	59.810	83.500	-/+
VESA, 1280 x 1024	63.981	60.020	108.000	+/+
VESA, 1280 x 1024	79.976	75.025	135.000	+/+
VESA, 1366 x 768	47.712	59.790	85.500	+/+
VESA, 1440 x 900	55.935	59.887	106.500	-/+
VESA, 1600 x 900	60.000	60.000	108.000	+/+
VESA, 1680 x 1050	65.290	59.954	146.250	-/+
VESA, 1920 x 1080	67.500	60.000	148.500	+/+
VESA, 3840 x 2160	67.500	30.000	297.000	+/+
VESA, 3840 x 2160	135.000	60.000	594.000	+/+

Chapter 15

Appendix

Responsibility for the Pay Service (Cost to Customers)

— When the service is requested, in spite of in warranty, we may charge you for a visit from a service technician in the following cases.

Not a product defect

Cleaning of the product, Adjustment, Explanation, Re-installation and etc.

- If a service technician gives instructions on how to use product or simply adjusts options without disassembling product.
- If a defect is caused by external environmental factors (Internet, Antenna, Wired Signal, etc.)
- If a product is reinstalled or devices are connected additionally after installing the purchased product for the first time.
- If a product is reinstalled to move to a different spot or to move to a different house.
- If customer requests instructions on how to use because of another company's product.
- If customer requests instructions on how to use the network or another company's programme.
- If customer requests software installation and setup for the product.
- If a service technician removes/cleans dusts or foreign materials inside of the product.
- If customer requests an installation additionally after purchasing a product through home-shopping or online.

A Product damage caused by customer's fault

Product damage caused by customer's mishandling or wrong repair

If a product damage is caused by;

- External impact or drop.
- Use of supplies or separately sold product unspecified by Samsung.
- Repair from a person besides an engineer of outsourcing service company or partner of Samsung Electronics Co., Ltd.
- Remodeling or repairing the product by customer.
- Using it with incorrect voltage or non-authorised electrical connections.
- Not following the "cautions" in User Manual.

Others

- If product fails by natural disaster. (lightning, fire, earthquake, flood damage, etc)
- If consumable components are all used up. (Battery, Toner, Fluorescent lights, Head, Vibrator, Lamp, Filter, Ribbon, etc.)

— If customer requests a service in case the product has no defect, service fee may be charged. So please read User Manual first.

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Covered by one or more of the following U.S. patents: 7,295,673; 7,460,668; 7,515,710; 8,656,183; 8,731,369; RE45,052.

This device supports DivX Plus Streaming® for enjoying HD movies and TV shows with advanced features (multi-language subtitles, multiple audio tracks, chapters, smooth FF/RW, etc.) streamed to your device.

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In the case of using open source software, Open Source Licences are available on the product menu. Open Source Licence Notice is written only English.

For information on the Open Source Licence Notice, contact the Samsung Customer Centre or send email to oss.request@samsung.com.

Terminology

480i / 480p / 720p / 1080i / 1080p_____

Each of the scanning rates above refers to the number of effective scanning lines that decides the screen resolution. The scanning rate may be indicated in i (interlaced) or p (progressive), depending on the scanning method.

- Scanning

Scanning refers to a process of sending pixels that form an image progressively. A larger number of pixels will deliver a clearer and more vivid picture.

- Progressive

In progressive scan mode, all lines of pixels are scanned one by one (progressively) on the screen.

- Interlaced

In interlaced scan mode, every other line of pixels is scanned from top to bottom first and then the remaining lines of pixels (that were not scanned) are scanned.

Non-interlace Mode and Interlace Mode_____

Non-interlace mode (progressive scan) displays a horizontal line from the top to the bottom of a screen progressively. Interlace mode displays the odd number lines first and the even number lines next. Non-interlace mode is mainly used in monitors as it produces screen clarity and interlace mode is mainly used in TVs.

Dot Pitch_____ The screen consist of red, green and blue dots. A shorter distance between the dots produces a higher resolution. Dot pitch refers to the distance between the shortest distance between dots of the same colour. Dot pitch is measured in millimetres.

Vertical Frequency_____ The product displays a single image many times per second (like a fluorescent light that flickers) to display an image for a viewer to see. The rate of a single image being displayed repeatedly per second is called vertical frequency or refresh rate. Vertical frequency is measured in Hz. E.g. 60Hz refers to a single image being displayed 60 times in one second.

Horizontal Frequency_____ The time required to scan a single line from the left to the right side of the screen is called a horizontal cycle. The reciprocal number of a horizontal cycle is called horizontal frequency. Horizontal frequency is measured in kHz.

Source_____ Input source refers to a video source device connected to the product such as a camcorder or video or DVD player.

Plug & Play_____ Plug & Play is a function that allows the automatic exchange of information between a monitor and PC to produce an optimum display environment. The product uses VESA DDC (international standard) to execute Plug & Play.

Resolution_____ Resolution is the number of horizontal dots (pixels) and vertical dots (pixels) that form a screen. It represents the level of display detail. A higher resolution enables more data to be displayed on the screen and is useful to perform multiple tasks simultaneously. E.g. A resolution of 1920 X 1080 consists of 1,920 horizontal pixels (horizontal resolution) and 1,080 vertical pixels (vertical resolution).

DVD (Digital Versatile Disc)_____ DVD refers to a CD-sized mass storage disk where you can save multimedia (audio, video or game) applications using MPEG-2 video compression technology.

HDMI (High Definition Multimedia Interface)_____ It is an interface that can be connected to a digital audio source as well as a high-definition video source by using a single cable without compression.

Multiple Display Control (MDC)_____ MDC (Multiple Display Control) is an application that allows multiple display devices to be controlled simultaneously using a PC. Communication between a PC and monitor takes place using RS232C (serial data transmission) and RJ45 (LAN) cables.